B.C.Hydro

Recreation Opportunities Inventory

Recreation Land Management
Environmental Resources
October 1988

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RECREATION OPPORTUNITIES INVENTORY

RECREATION LAND MANAGEMENT
ENVIRONMENTAL RESOURCES

OCTOBER 1988

TABLE OF CONTENTS

Page

OVERVIEW

Table I - Reservoir Recreation Opportunities, Summary Rating

INVENTORY - RESERVOIR RECREATION OPPORTUNITIES

VANCOUVER ISLAND REGION:

Comox Lake 7
Puntledge Headpond 10
Bear Creek Lake) 14
Diversion Dam Lake) Jordan River 16
Elliott Reservoir) 18
Elsie Lake 21
Heber Diversion 25
Wokas Lake - Quinsam Diversion 27
Upper Campbell Lake 30
Lower Campbell Lake 34
Salmon River Diversion 38
John Hart Lake 42

LOWER MAINLAND REGION:

Alouette Lake 46
Stave Lake 50
Buntzen Lake 56
Coquitlam Lake 60
Clowhom Lake 63
Daisy Lake 67
Hayward Lake 71
Jones (Wahleach) Lake 75

SOUTH INTERIOR REGION:

Arrow Lakes 80
Bull River Headpond 85
Carpenter Lake 89
Coursier Lake 93
Cranberry Headpond 95
Downton Lake 99
Duncan Lake 103
Elk River Headpond 108
Kinbasket Lake 112

Page

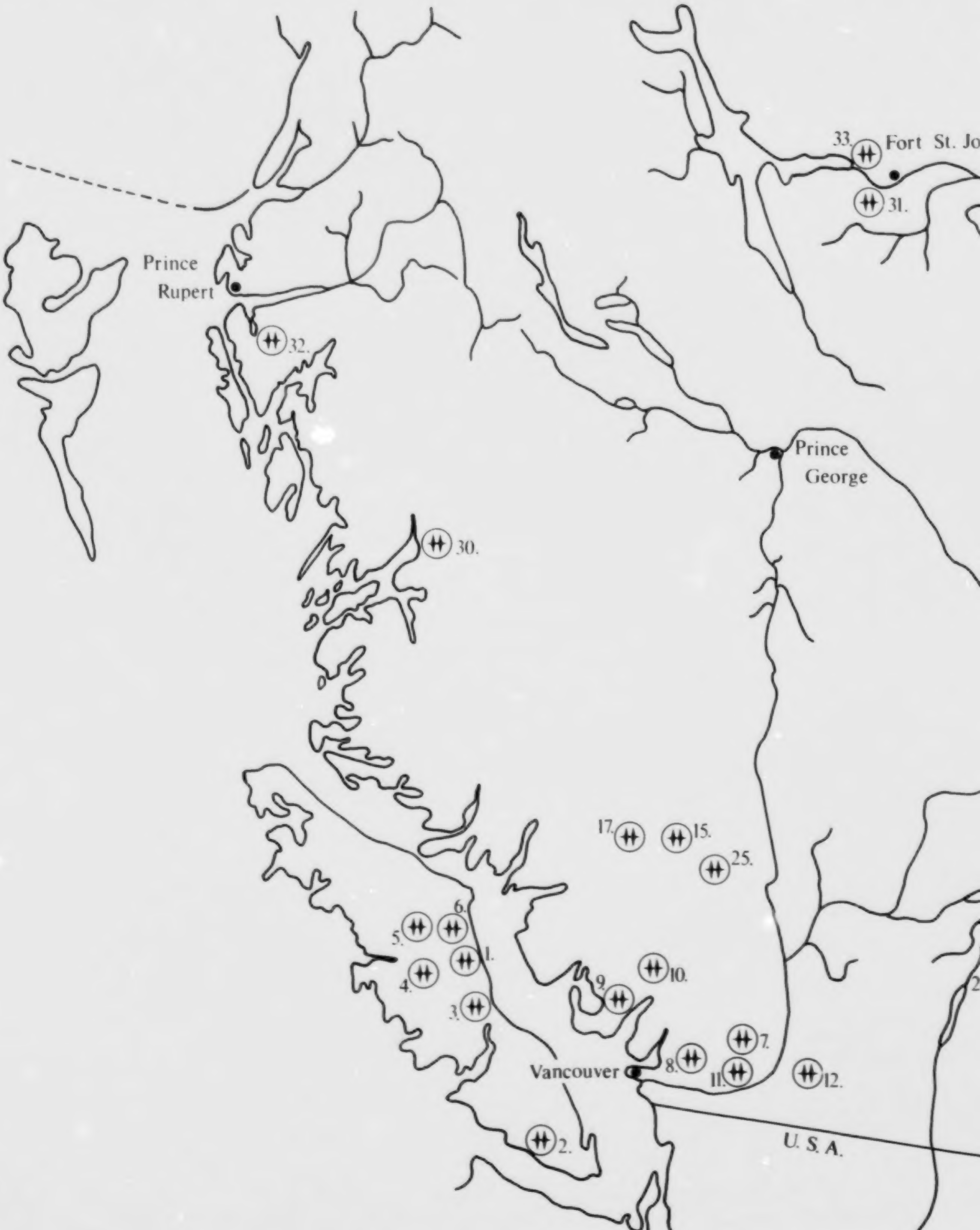
Kootenay Canal 116
Pend D'Oreille Reservoir 120
Revelstoke Lake 124
Seton Lake 129
Shuswap River 134
Spillimacheen Diversion 139
Sugar Lake 142
Whatshan Lake 147

NORTHERN REGION:

Clayton Falls 152
Dinosaur Lake (Peace Canyon) 155
Falls Lake 159
Williston Lake 162
Lake Koocanusa 167

Locations

B.C.Hydro Reservoirs



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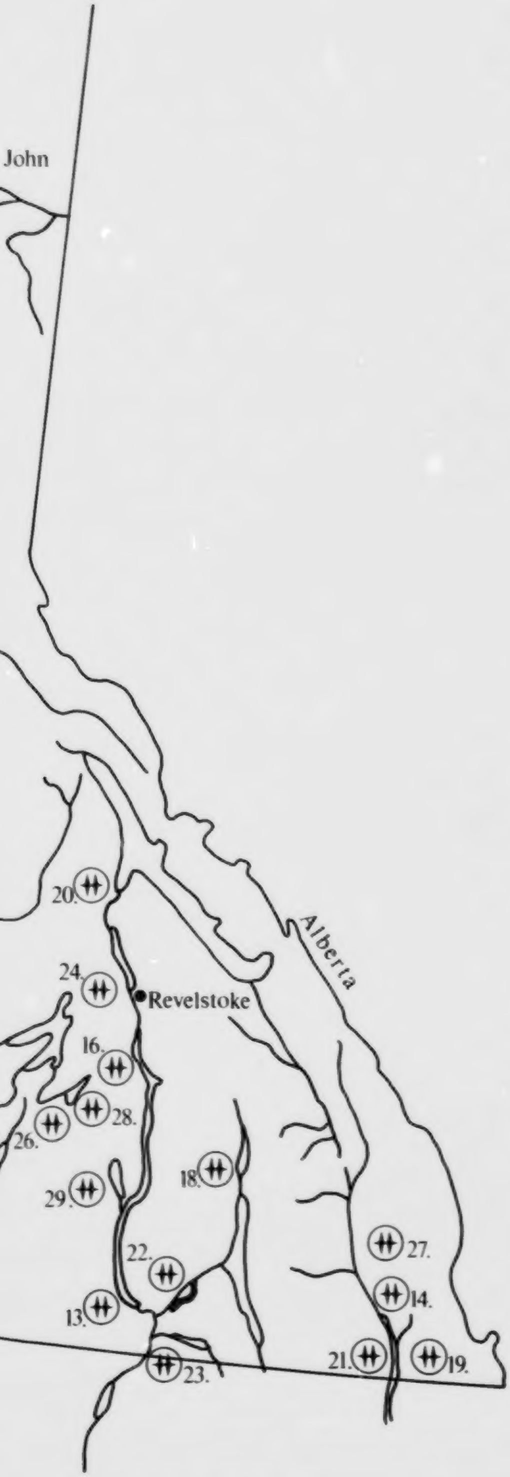


1. COMOX LAKE   PUNTLEDGE HEADPOND
2. BEAR CREEK L.   DIVERSION DAM L.   ELLIOTT RESERVOIR
3. ELSIE LAKE
4. WOKAS LAKE   HEBER DIVERSION   UPPER CAMPBELL LAKE
5. SALMON RIVER DIVERSION   LOWER CAMPBELL LAKE
6. JOHN HART LAKE
7. STAVE LAKE   ALOUETTE LAKE
8. COQUITLAM LAKE   BUNTZEN LAKE
9. CLOWHOM LAKE
10. DAISY LAKE
11. HAYWARD LAKE
12. JONES (WAHLEACH) LAKE
13. ARROW LAKES
14. BULL RIVER
15. CARPENTER LAKE
16. CRANBERRY HEADPOND   COURSIER LAKE
17. DOWNTON LAKE
18. DUNCAN LAKE
19. ELK RIVER
20. KINBASKET LAKE
21. KOOCANUSA
22. KOOTENAY CANAL
23. PEND D'OREILLE (SEVEN MILE PROJECT)
24. LAKE REVELSTOKE
25. SETON LAKE
26. SHUSWAP FALLS
27. SPILLIMACHEEN DIVERSION
28. SUGAR LAKE
29. WHATSHAN
30. CLAYTON FALLS
31. DINOSAUR LAKE
32. FALLS LAKE
33. WILLISTON LAKE

Reservoir Locations

OVERVIEW

At the request of B. C. Hydro's Board of Directors, a review of all Hydro's reservoirs was undertaken to inventory ways by which recreation use of these resources could be facilitated. This Inventory is the result of discussions held with Recreation Officers with the Ministry of Forests, Planners with the Parks Branch as well as a review of information available to the Recreation Land Management Section of Environmental Resources.

An overview of the ways by which recreational use of B. C. Hydro reservoirs could be facilitated is presented in Table I, RESERVOIR RECREATION OPPORTUNITIES, SUMMARY RATING. This table indicates that each region of the province has projects which could provide MODERATE, or better, opportunities for enhancing recreational use. GOOD opportunity ratings were assigned to three projects in the South Interior Region, three in the Lower Mainland Region, and one on Vancouver Island.

For the province as a whole, twenty-three (23) projects have moderate to good prospects for supporting further recreational development and use. Eleven (11) projects, or about 1/4 of the total, have at least a moderate capability for further development in a broad range of recreational activities. Of these, seven (7) projects appear to present good, or excellent, opportunities for recreational enhancement.

TABLE I

RESERVOIR RECREATION OPPORTUNITIES

SUMMARY RATING

PROJECT	OPPORTUNITY RATING	RANGE OF ACTIVITIES	MAJOR ACTIVITIES
Vancouver Island Region:			
Comox Lake	1	W	CPF Bh Bt Hk
Puntledge Headpond	2	L	PF Hk
Bear Creek Lake	3	L	F
Diversion Dam Lake	3	L	F
Elliott Reservoir	3	L	F
Elsie Lake	3	L	CF
Heber River Diversion	3	L	F
Wokas Lake	3	L	F
Upper Campbell Lake	2	L	CPF Bt
Lower Campbell Lake	2	W	CPF Bh Bt
Salmon River Diversion	3	L	F
John Hart Lake	3	L	CP
Lower Mainland Region:			
Stave Lake	1	W	CPF Bh Bt
Alouette Lake	1	W	CPF Bh Bt
Buntzen Lake	2	L	P Bh Hk
Coquitlam Lake	3	L	N
Daisy Lake	1	W	CPF Bh Bt
Clowhom Lake	3	L	F
Hayward Lake	2	L	P F Bh
Jones (Wahleach) Lake	2	L	CP

PROJECT	OPPORTUNITY RATING	RANGE OF ACTIVITIES	MAJOR ACTIVITIES
Southern Interior Region:			
Arrow Lake	1	W	CPF Bt Hge
Bull River Headpond	3	L	F
Carpenter Lake	1	W	CPF Hge Bh Bt
Coursier Lake	3	L	F
Cranberry Headpond	3	L	F
Downton Lake	3	L	F
Duncan Lake	2	L	CPF Bt
Elk River Headpond	2	L	F Wv
Kinbasket Lake	1	W	CPF Bt
Kootenay Canal	3	L	P
Pend D'Oreille (Seven Mile)	2	W	CP Hk Hge
Revelstoke Lake	2	W	CPF Bt Hk
Seton Lake	2	W	CPF Hge Bh Bt
Shuswap River	2	L	PF
Spillimacheen Diversion	3	L	F
Sugar Lake	2	L	CPF Bt
Whatshan Lake	2	L	CPF Bt
Northern Region:			
Clayton Falls Headpond	2	L	P
Dinosaur Lake (Peace Canyon)	3	L	CPF
Falls Lake	3	L	N
Williston Lake	2	L	CPF

RATING KEY

Opportunity Rating

1 Good
2 Moderate
3 Little or None

The opportunity rating is a subjective assessment of recreational development potential. This rating also includes consideration of accessibility to the reservoir and demand for facilities.

ACTIVITY KEY

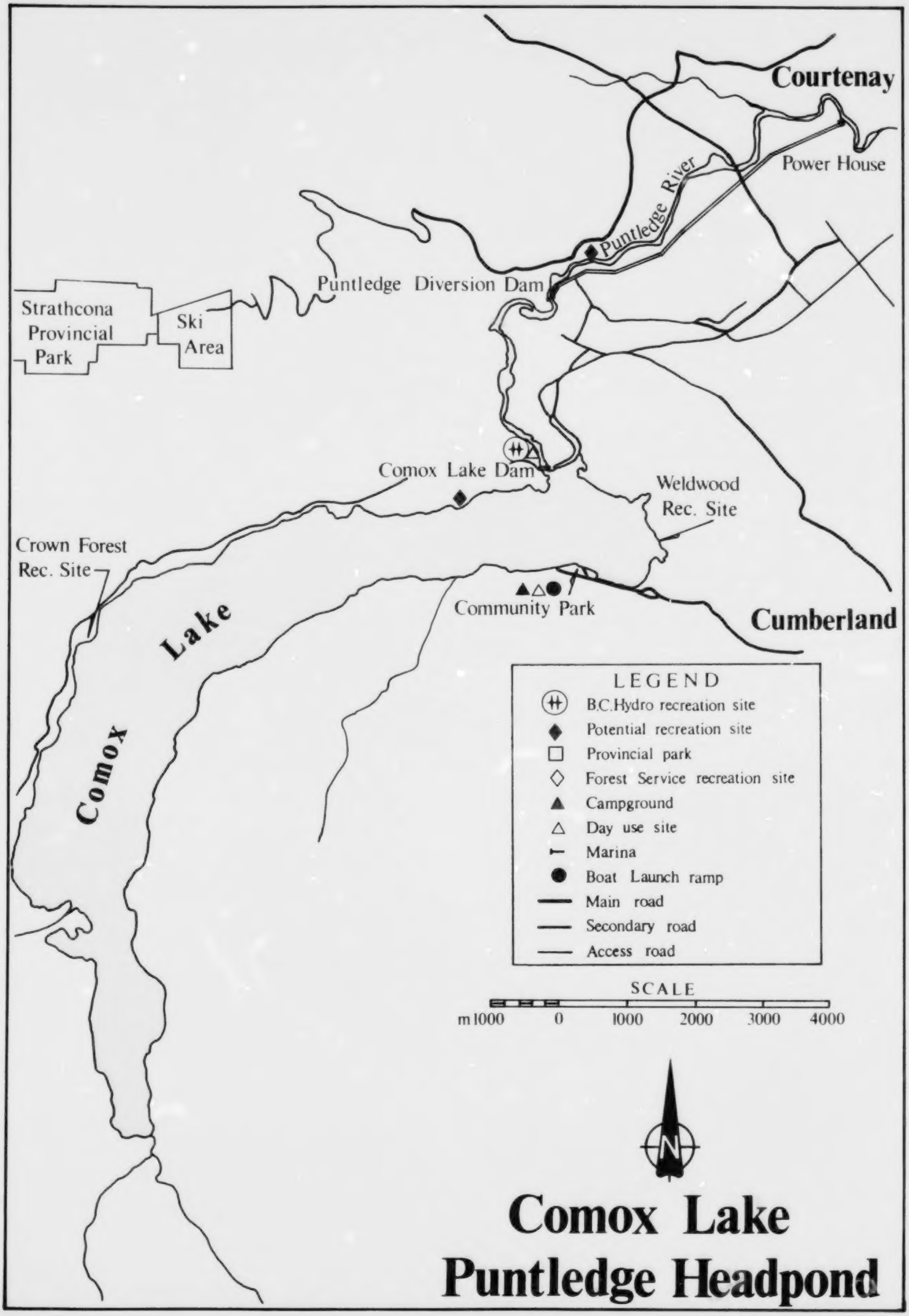
C Camping
P Picnicking
F Fishing
Bh Beach Activities
Bt Boating
Hk Hiking
Hge Heritage Features
Wv Wildlife Viewing
N None

The activities indicated in the table are those most commonly occurring or possible and do not include all actual or possible recreational uses on a reservoir.

Range of Activities

L - The reservoir is generally suitable for a limited variety of recreational uses or development opportunities.

W - The reservoir is generally suitable for a wide variety of recreational uses or development opportunities.



Comox Lake
Puntledge Headpond

COMOX LAKE

1.0 LOCATION

Comox Lake is situated approximately 9 km southwest of Courtenay on the east coast of Vancouver Island.

Access to Comox Dam is by paved road off the Island Highway to Cumberland, then about 9 km along a main gravel road. Access to the lake can also be gained via a 5 km paved road from Cumberland. The north side of Comox Lake is paralleled by a main line logging road that extends to the southern most end of the lake and then through to Port Alberni. Logging traffic is a potential hazard when travelling these roads.

2.0 LAND STATUS

B. C. Hydro owns land at the outlet (Puntledge River) of Comox Lake at the site of the Comox Lake Dam, and at the diversion dam about 4 km downstream. There are privately owned lands on the northeast shore and at the south end of the lake.

A recreation area operated by the Village of Cumberland is located on the south shore at the east end of the lake.

Most of the land surrounding Comox lake is under Forest Tenure.

Hydro may have land holdings on the southeast end of the lake that were purchased in the 1950s in anticipation of flooding the area. Since they were not flooded, many were leased and/or sold back.

3.0 GENERATION FACILITIES

The Puntledge generating system was originally developed in 1912 by Canadian Colleries (Dunsmuir) Ltd. The system consists of a storage dam at the outlet of Comox Lake, a diversion dam 4 km downstream, and a power plant a further 5 km downstream on the Puntledge River.

4.0 RECREATION PERSPECTIVE

Comox Lake is a popular recreational attraction for swimming, boating, fishing and family camping. The Village of Cumberland has developed a community oriented day-use picnic area and beach as well as a small campground at the east end of the lake. There are several informal and potential recreation sites elsewhere on the lake, and the Regional District plans to establish a beach access park near the B. C. Hydro damsite.

5.0 RECREATIONAL OPPORTUNITIES

Comox Lake provides excellent opportunities for swimming, boating, fishing, picnicking and camping.

6.0 RECREATION DEVELOPMENTS

B. C. Hydro has developed a small picnic area and viewpoint on the left bank of the Puntledge River adjacent to the Comox Lake Dam. Facilities include a 10-car parking area, four picnic tables, one pit toilet, an information display and landscaped picnic area.

The community park developed and operated by the Village of Cumberland contains facilities for swimming, camping, picnicking, boat launching, parking, and a food concession. There is also a well developed children's playground.

Crown Forest has developed a small public use area on the west side of the lake.

Weldwood has developed a small day-use/camping area on its private land at the east end of the lake.

7.0 USE

Attendance at the B. C. Hydro facility is as follows:

1985 - 17,916 visitors
1986 - 8,905 visitors
1987 - 9,556 visitors

The Cumberland Park lakeside campground is often used to capacity during the peak season.

Considerable use occurs at several informal sites just east and west of the dam.

8.0 DEVELOPMENT POTENTIAL

This lake has high potential for fishing, boating, swimming and localized beach development.

The Comox-Strathcona Regional District plans to develop a beach access park just west of the B. C. Hydro damsite. This site is an existing Crown recreation reserve and the park proposal is supported by the Forest Service.

9.0 ISSUES

The Corporation of the Village of Cumberland has expressed an interest in involving B. C. Hydro with the development and operation of their community park on the west shore of Comox Lake.

In the past the Village of Cumberland's park has been impacted by high water levels. The result has been some erosion of facilities, affecting the beach and boat launch areas.

PUNTLEDGE HEADPOND

1.0 LOCATION

Puntledge Headpond is located about 6 km west of the City of Courtenay on the east coast of Vancouver Island. Access to the headpond is by paved road from the Island Highway to Cumberland, then about 9 km along a gravel road.

2.0 LAND STATUS

B. C. Hydro owns land at the dam and associated generation facilities. Land around the headpond is Crown-owned with the southern portion in Tree Farm Licence 2. The Federal Government owns fish hatcheries adjacent to the power house downstream.

3.0 GENERATION FACILITIES

Facilities at the headpond include the diversion dam, discharge sluiceway and overflow sluices, and fishways to provide fish passage into Comox Lake. A pipeline carries water from the diversion to a power house on the Puntledge River about 4 km downstream. A minimum flow of 725 ft^3/s, when available, must be maintained downstream of the plant for fisheries purposes. The headpond is merely a controlled section of the Puntledge River with no significant storage capacity.

4.0 RECREATION PERSPECTIVE

Due to its proximity to Comox Lake and nearby settlements, the Puntledge Headpond area supports significant recreational use. Fisheries values on the Puntledge system are high and are being improved by the hatcheries near the power house. An area downstream of the dam is proposed as a park for shoreline protection.

5.0 RECREATIONAL OPPORTUNITIES

Opportunities for recreation in the headpond area include fishing, swimming and sunbathing.

6.0 RECREATIONAL DEVELOPMENTS

There are no developed facilities on the headpond, but a variety of sites has been developed on nearby Comox Lake.

7.0 USE

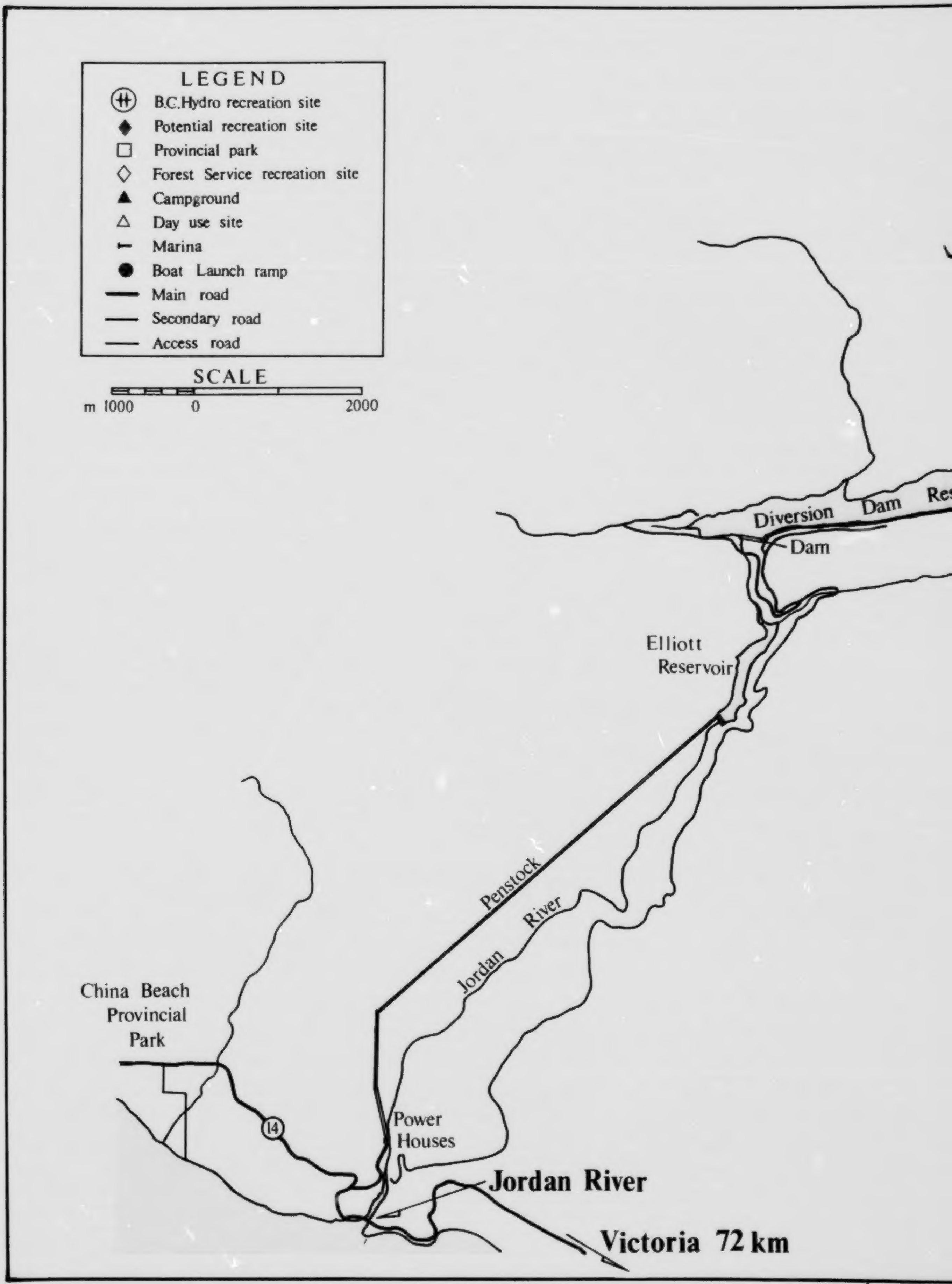
Recreational use data for the headpond are not available.

8.0 DEVELOPMENT POTENTIAL

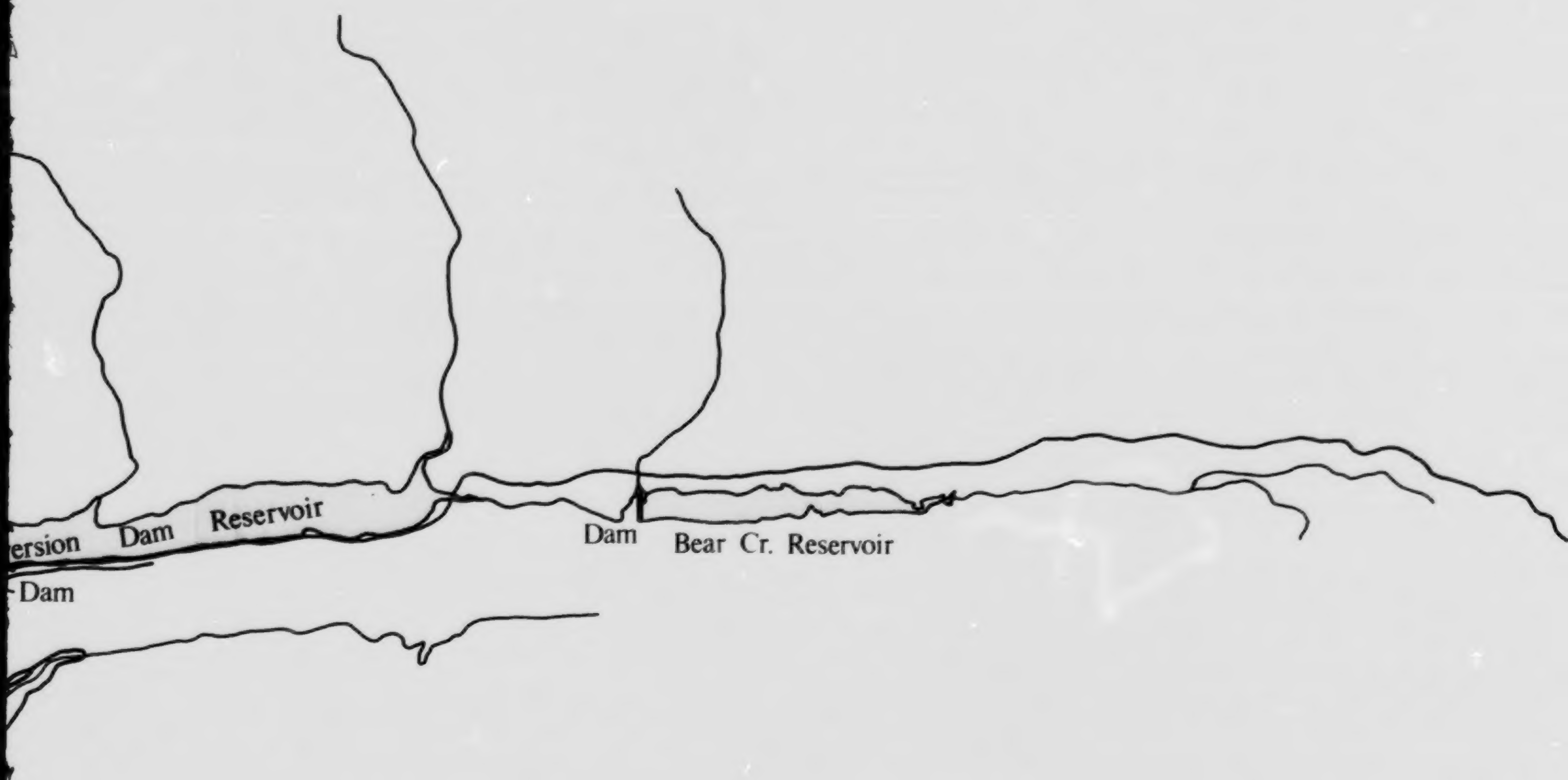
Potential use of the headpond itself is limited, but trail development along the edges of the headpond is a possibility. A Crown recreation reserve immediately below the dam is proposed as a Regional District Shoreline Protection Park providing opportunities for swimming and nature study. The Forest Service supports this park proposal.

9.0 ISSUES

There is some hazard associated with public use in an area of unmanned B. C. Hydro facilities.



LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
m 1000
0
2000
Diversion Dam Res
Dam
Elliott Reservoir
Penstock
Jordan River
China Beach Provincial Park
14
Power Houses
Jordan River
Victoria 72 km



Bear Creek Lake
Diversion Dam Lake
Elliott Reservoir

BEAR CREEK LAKE

1.0 LOCATION

Bear Creek Lake lies within the Jordan River watershed about 72 km southwest of Victoria on the west coast of Vancouver Island. Access is gained from the northeast along the Shawnigan Lake - Port Renfrew Highway or from the south along the Victoria - Port Renfrew Highway. All roads into the reservoir itself are active logging roads with public use restrictions.

2.0 LAND STATUS

B. C. Hydro owns a narrow strip around the entire reservoir. The land beyond is within the Esquimalt and Nanaimo Railway Lands Grant.

3.0 GENERATION FACILITIES

The Bear Creek Dam is a 20 m high earthfill structure. Average annual reservoir drawdown is 4.2 m and usually occurs in July-August.

4.0 RECREATION PERSPECTIVE

This small lake with severe access restrictions and low aesthetic value affords very limited opportunity for recreation. Hazards include reservoir debris and extreme fire danger in the dry summer months. The lake has a small local fishery but area wildlife values are low.

5.0 RECREATIONAL OPPORTUNITIES

The lake lacks significant fisheries to attract recreational use. It serves only transient hunters and fishermen in the fall.

6.0 RECREATIONAL DEVELOPMENTS

There are no recreational facilities on the lake.

7.0 USE

Recreational use of this reservoir is low.

8.0 DEVELOPMENT POTENTIAL

Potential for recreational development on this lake can be considered extremely low.

9.0 ISSUES

Since its potential is so low, there are no significant issues related to the development of this area.

DIVERSION DAM LAKE

1.0 LOCATION

Diversion Dam Lake in the Jordan River watershed is about 6 km downstream from Bear Creek or about 78 km southwest of Victoria. Access is gained from the northeast along Shawnigan Lake - Port Renfrew Highway or from the south along the Victoria - Port Renfrew Highway. All roads into the reservoir itself are active logging roads with public use restrictions.

2.0 LAND STATUS

B. C. Hydro owns the land immediate to its facilities. The surrounding land is within the Esquimalt and Nanaimo Railway Lands Grant.

3.0 GENERATION FACILITIES

The diversion dam is a 38.4 m high concrete structure. This reservoir provides the main storage regulation for the entire Jordan River development and drawdowns are often large during dry summers.

4.0 RECREATION PERSPECTIVE

This area has low aesthetic value, low fish and wildlife values, and is generally unattractive for recreation. Severe debris problems are the greatest impediment to recreational development.

5.0 RECREATIONAL OPPORTUNITIES

Opportunities for recreation are considered to be virtually non-existent.

6.0 RECREATIONAL DEVELOPMENTS

There is no recreational development at the reservoir.

7.0 USE

Recreational use, if it occurs at all, is extremely low.

8.0 DEVELOPMENT POTENTIAL

The reservoir has essentially no potential for recreational development.

9.0 ISSUES

Reservoir debris is considered to be the greatest impediment to recreational use, but, considering the area's overall limited qualities for recreation, this can hardly be called a significant development issue.

ELLIOT RESERVOIR

1.0 LOCATION

The Elliot Reservoir is approximately 8 km upstream from the mouth of the Jordan River on the south coast of Vancouver Island. Access is gained from the northeast along the Shawnigan Lake - Port Renfrew Highway or from the south along the Victoria - Port Renfrew Highway. All roads into the reservoir itself are active logging roads with public use restrictions.

2.0 LAND STATUS

B. C. Hydro owns the land around the reservoir and at the associated project facilities. The surrounding land on the north side of the reservoir is within the Esquimalt and Nanaimo Railway Lands Grant and that on the south side is within Tree Farm Licence 25. The remaining land adjacent to the penstock and power house is Crown-owned.

3.0 GENERATION FACILITIES

Facilities at the reservoir include a 35 m high concrete dam, intake structure and 68 m spillway. A 5.8 km long tunnel and 1.6 km penstock carry water to the 150,000 kW capacity power house near the mouth of the Jordan River. This plant provides vital peaking and standby power for the Vancouver Island system. The Elliot Reservoir serves as a headpond with virtually no storage function and undergoes extreme drawdowns.

4.0 RECREATION PERSPECTIVE

This reservoir is exclusively a generation facility with no recreational opportunity or use. Wildlife, fish and aesthetic values in this area are low. Extreme drawdowns and debris accumulations are major hazards to public use.

5.0 RECREATIONAL OPPORTUNITIES

Due to low resource values and extreme hazards, this area is considered to provide no opportunity for recreation.

6.0 RECREATIONAL DEVELOPMENTS

No recreational developments exist in this area.

7.0 USE

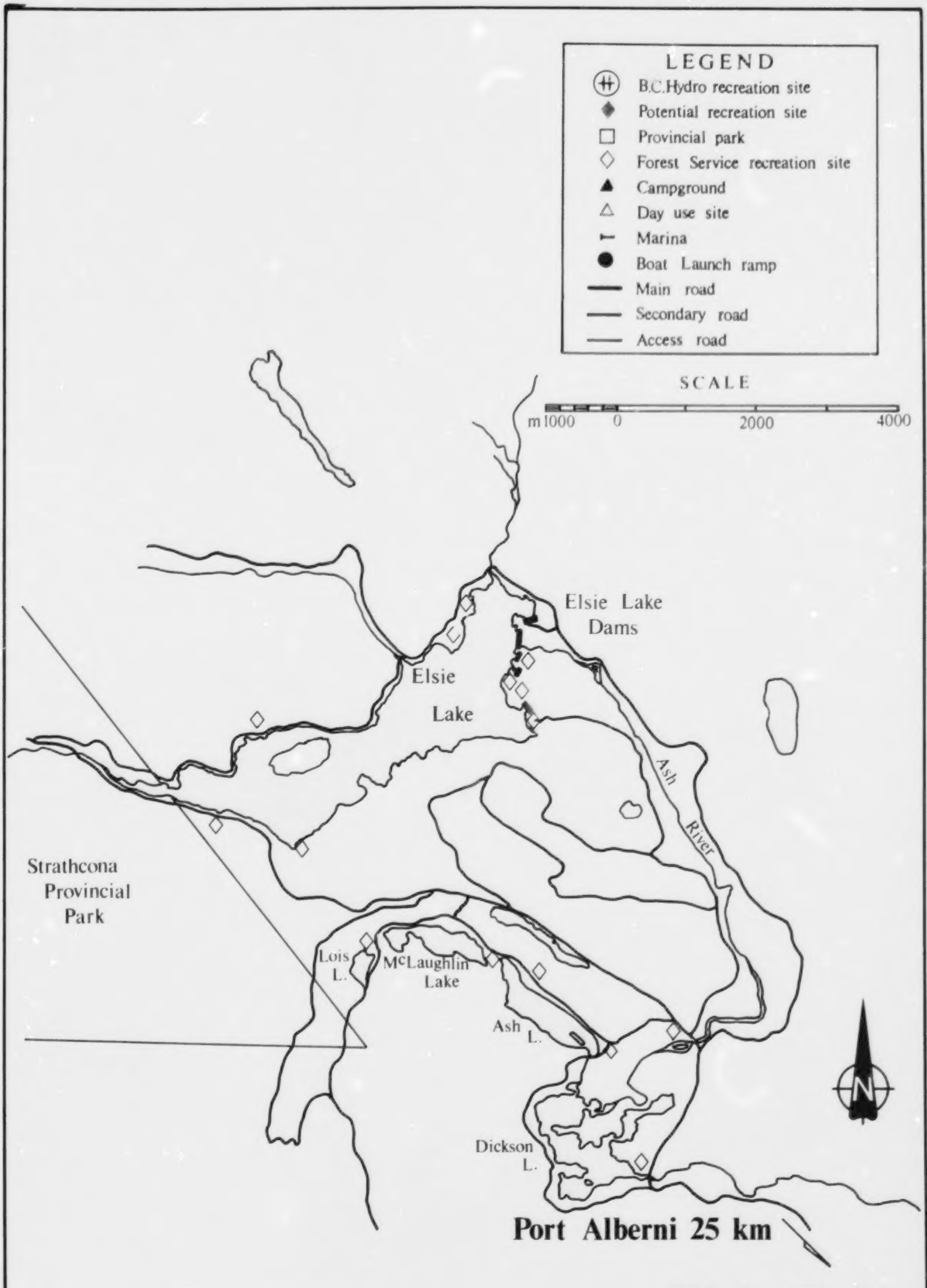
There is no significant recreational use of this area.

8.0 DEVELOPMENT POTENTIAL

There is no development potential on this reservoir.

9.0 ISSUES

Since area resource values are so low, and development potential non-existent, there are no issues related to recreational development of this reservoir.


LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
m 1000
0
2000
4000
Elsie Lake Dams
Elsie Lake
Ash River
Strathcona Provincial Park
Lois L.
McLaughlin Lake
Ash L.
Dickson L.
N
Port Alberni 25 km

Elsie Lake

ELSIE LAKE

1.0 LOCATION

Elsie Lake is located about 30 km northwest of Port Alberni on east-central Vancouver Island. The lake lies within the Ash River watershed between the Beaufort Range on the east and Strathcona Provincial Park on the west.

Access is gained by Highway 4 from Port Alberni to Great Central Lake (15 km) and then by logging road for the remaining 30 km. Branch forest roads provide access around the entire lake. Access is limited by seasonal washouts and heavy winter snowfalls.

2.0 LAND STATUS

B. C. Hydro owns land at the dam sites and diversion intake. MacMillan Bloedel controls most of the adjacent lands within the Esquimalt and Nanaimo Railway Lands Grant. The western tip of the lake is within Strathcona Provincial Park.

3.0 GENERATION FACILITIES

Facilities include a 27 m high main dam on the Ash River and four saddle dams.

An intake on the south shore of the lake diverts water through a tunnel and pipeline about 7.4 km to the powerhouse on Great Central Lake. Maximum annual reservoir drawdown is about 15 m.

4.0 RECREATION PERSPECTIVE

Elsie Lake is used for fishing and camping primarily by local residents.

A number of small, locally maintained clearings without facilities satisfy local requirements.

5.0 RECREATIONAL OPPORTUNITIES

The lake provides opportunities for fishing, camping and a base for hunting. Canoeing is also a possibility on this low hazard reservoir.

6.0 RECREATIONAL DEVELOPMENTS

Nine small (less than six vehicle) primitive camping areas without facilities are scattered around the lake. Maintenance is done by local users.

7.0 USE

Use of this area is low and occasional.

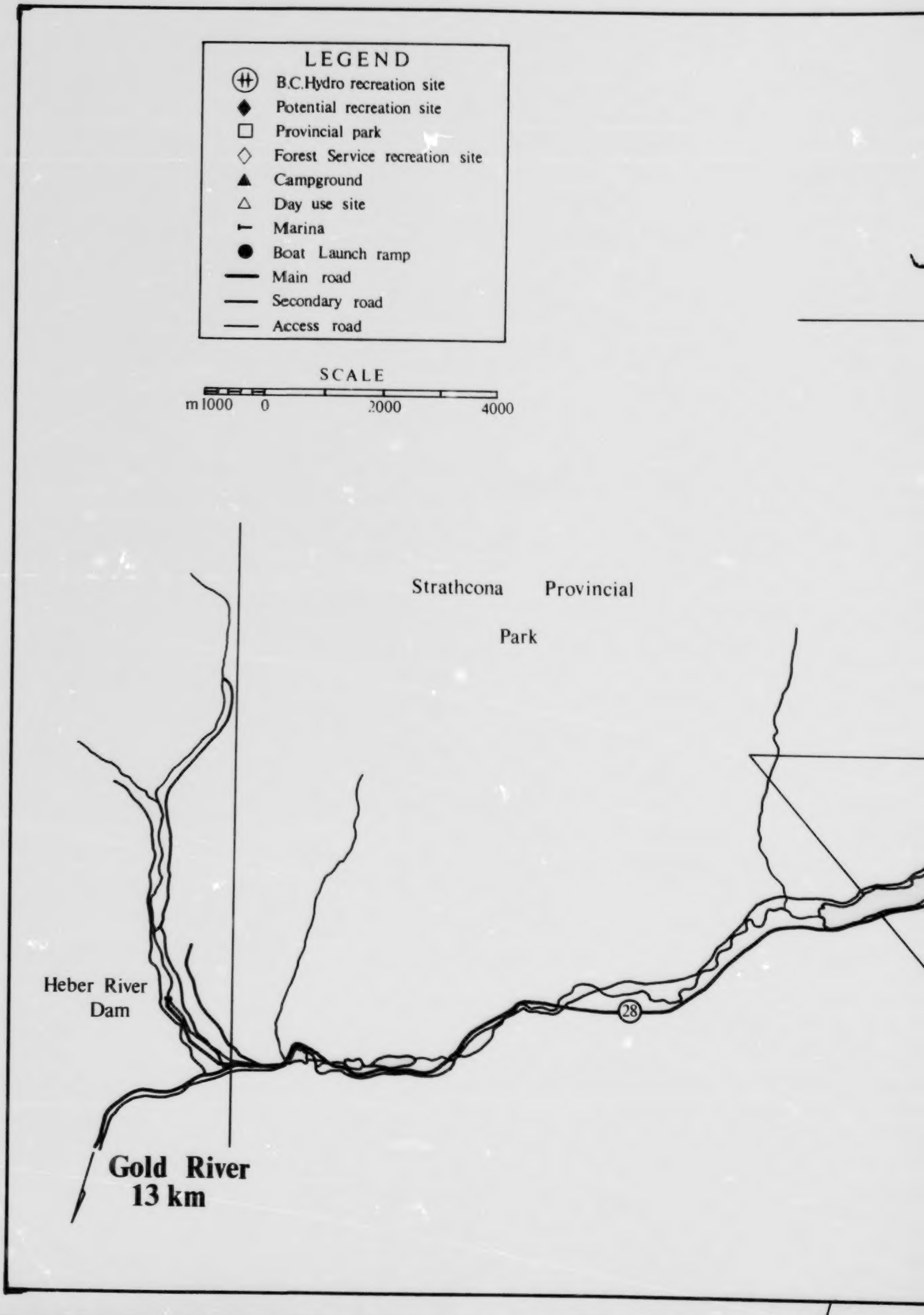
The area is visited mainly during April to June. Summer and fall use is more transient and less frequent, and hunters tend to pass through the area without camping during the fall.

8.0 DEVELOPMENT POTENTIAL

Further development could include the provision of pit toilets and picnic tables should this be deemed appropriate by local users.

9.0 ISSUES

The requirement for further development of this area would be determined by the interests and demand of local users. Demand for enhanced facilities is not apparent.


LEGEND
B.C.Hydro recreation site
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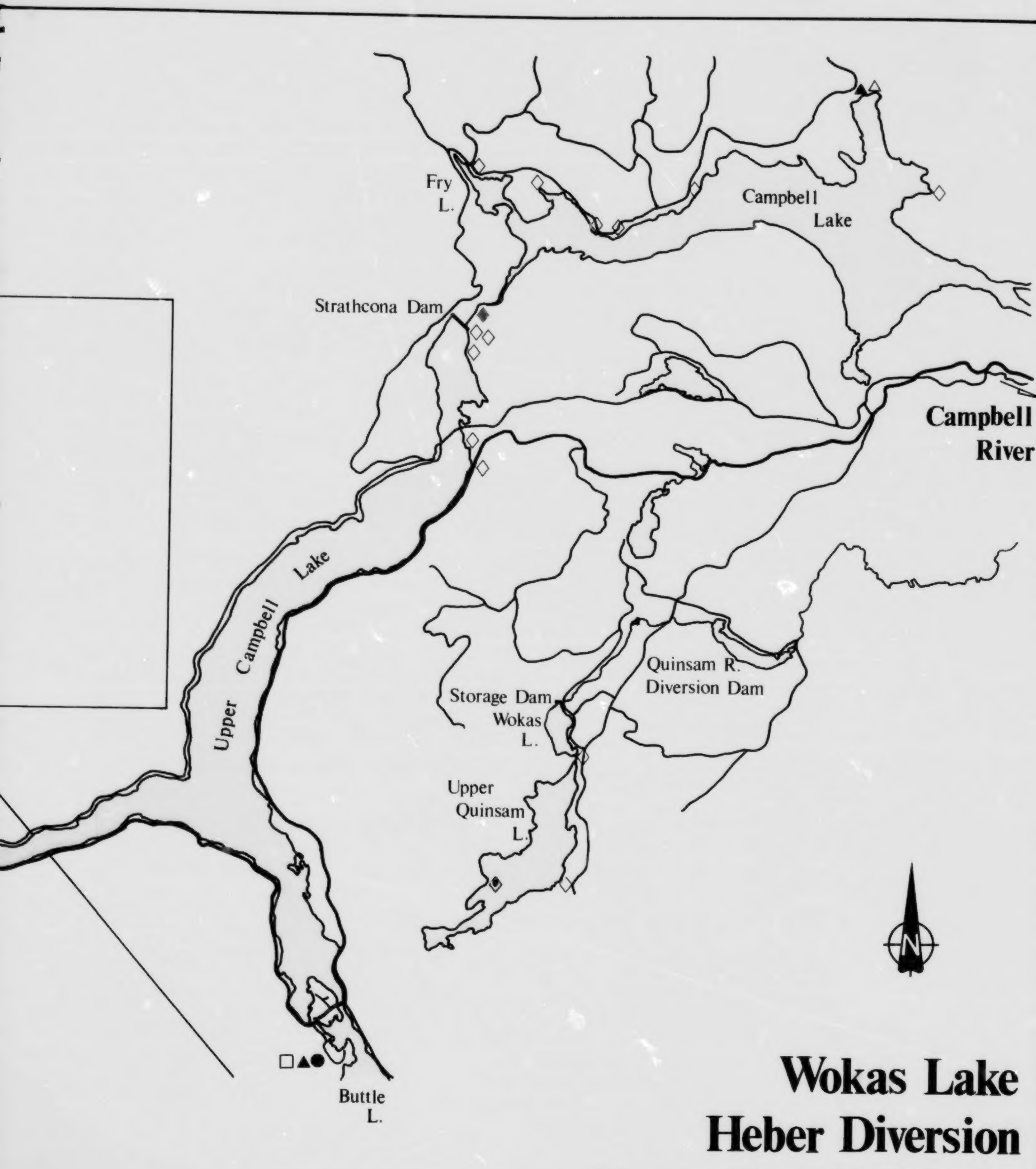
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
m 1000
0
2000
4000
Strathcona Provincial Park
Heber River Dam
28
Gold River 13 km



Wokas Lake Heber Diversion Upper Campbell Lake

HEBER DIVERSION

1.0 LOCATION

The Heber River, located west of the Campbell River system, flows southwest to the west coast of Vancouver Island. The point of diversion into the Campbell River system is located 16 km east of Gold River and 64 km west of Campbell River. Access to the site is by about 1.5 km of gravel logging road from Highway 28.

2.0 LAND STATUS

The diversion is located within Strathcona Provincial Park but B. C. Hydro controls the damsite and facilities.

3.0 GENERATION FACILITIES

The diversion facilities consist of a 10 m high timber crib dam and a 3.6 km woodstave pipeline into Crest Lake. There is a 10 m diameter pool at the dam which requires occasional gravel removal.

4.0 RECREATION PERSPECTIVE

This area of high wildlife and fish values, including an important downstream steelhead run, experiences low recreational use. Local sports fishermen would prefer that the diversion dam and Heber Falls be modified or removed to allow further steelhead migration.

5.0 RECREATIONAL OPPORTUNITIES

Activities in the diversion area are limited to fishing and sight-seeing.

6.0 RECREATIONAL DEVELOPMENTS

There are no recreational facilities in the area.

7.0 USE

Recreational use of the area is low.

8.0 DEVELOPMENT POTENTIAL

There is no development potential in this area.

9.0 ISSUES

Concern of local residents and the Fish and Wildlife Branch regarding the effect of the diversion on the steelhead fishery is the major issue.

WOKAS LAKE - QUINSAM RIVER DIVERSION

1.0 LOCATION

Wokas Lake is located approximately 35 km southwest of Campbell River. Access from Campbell River is by paved Highway 28 for 17 km, the Argonaut Mine Road for about 10 km, and a branch logging road to the north end of the reservoir. Poor road conditions often restrict access.

2.0 LAND STATUS

B. C. Hydro controls the land at its facilities. All the land surrounding the reservoir is within the Esquimalt and Nanaimo Lands Grant and is controlled by forest companies.

3.0 GENERATION FACILITIES

Facilities at this storage and diversion system include a 2.4 m high concrete dam at the outlet of Wokas Lake, a 12 m high concrete diversion dam about 5 km downstream on the Quinsam River, and a 1600 m canal draining into the Miller Creek watershed and Lower Campbell Lake.

The maximum normal annual drawdown is 3 m. Drawdowns must provide for low flow storage for fisheries use downstream of the diversion, and a minimum release at the diversion of 10 ft^3/s is required from 1 September to 15 November.

4.0 RECREATION PERSPECTIVE

The Wokas Lake - Upper Quinsam Lake area has low recreational use with the main activities being fishing and camping by the local population. The area supports a good population of Rainbow and Cutthroat trout.

5.0 RECREATIONAL OPPORTUNITIES

Boating, fishing and camping, almost exclusively by locals, are the main recreational opportunities in this area.

6.0 RECREATIONAL DEVELOPMENTS

Two primitive camping areas exist on the east side of the lakes and one area is located on a small island in Upper Quinsam Lake.

7.0 USE

Recreational use in this area is low and almost entirely local.

8.0 DEVELOPMENT POTENTIAL

Minimal development of camping areas, such as the provision of pit toilets, could be considered if warranted by demand.

9.0 ISSUES

Facility enhancement in this local use area might attract visitor use which may not be welcomed by local users.

High fisheries values on the Lower Quinsam River require cooperation between B. C. Hydro operation and Fisheries staff.

UPPER CAMPBELL LAKE

1.0 LOCATION

Upper Campbell Lake is located about 23 km west of Campbell River.

Access along the eastern shore of the lake is by paved Highway 28 from Campbell River to Gold River. A mainline logging road, maintained year-round and open to the public, provides access to the west side of the lake.

2.0 LAND STATUS

B. C. Hydro owns land at the Strathcona damsite. Private lands on the east shore include recreational properties at the mouth of Cedar Creek, and the Strathcona Outdoor Education Centre. Forest companies control the remainder of the Esquimalt and Nanaimo Railway Lands Grant.

3.0 GENERATION FACILITIES

Generation facilities include the 52 m high earthfill dam, intake, pipeline and powerhouse producing 33,750 kW.

The average annual reservoir drawdown is 19 m. Drawdowns must be limited to 1 m/month during the June-August tourist season and are usually coordinated with B. C. Parks to avoid conflicts with campers on Buttle Lake in Strathcona Park.

4.0 RECREATION PERSPECTIVE

Upper Campbell Lake offers varied and dispersed recreational opportunities to tourists and local users.

Recreational enjoyment is affected by large accumulations of floating debris. Snags and stumps create hazards to boating and recreational activity during low water periods.

5.0 RECREATIONAL OPPORTUNITIES

The lake provides opportunities for boating, fishing, camping, picnicking, sightseeing, outdoor education and cottages.

6.0 RECREATIONAL DEVELOPMENTS

Current facilities in the area include the Strathcona Outdoor Education Centre and private cottages. B. C. Parks has vehicle access and marine access campsites on Buttle Lake.

Several informal recreation sites exist along the northeastern shore of the lake, in the Buttle Narrows area off Hwy. 28, and above the Strathcona Dam.

7.0 USE

Attendance at Strathcona Park Campgrounds (on Buttle Lake) in 1987 was as follows:

Camping	9,683 party-nights
Day-use	15,381 persons

Boater use on Buttle Lake was estimated at 1,009 boats in 1987. Overall recreational use on Upper Campbell Lake is considered to be moderate and increasing.

8.0 DEVELOPMENT POTENTIAL

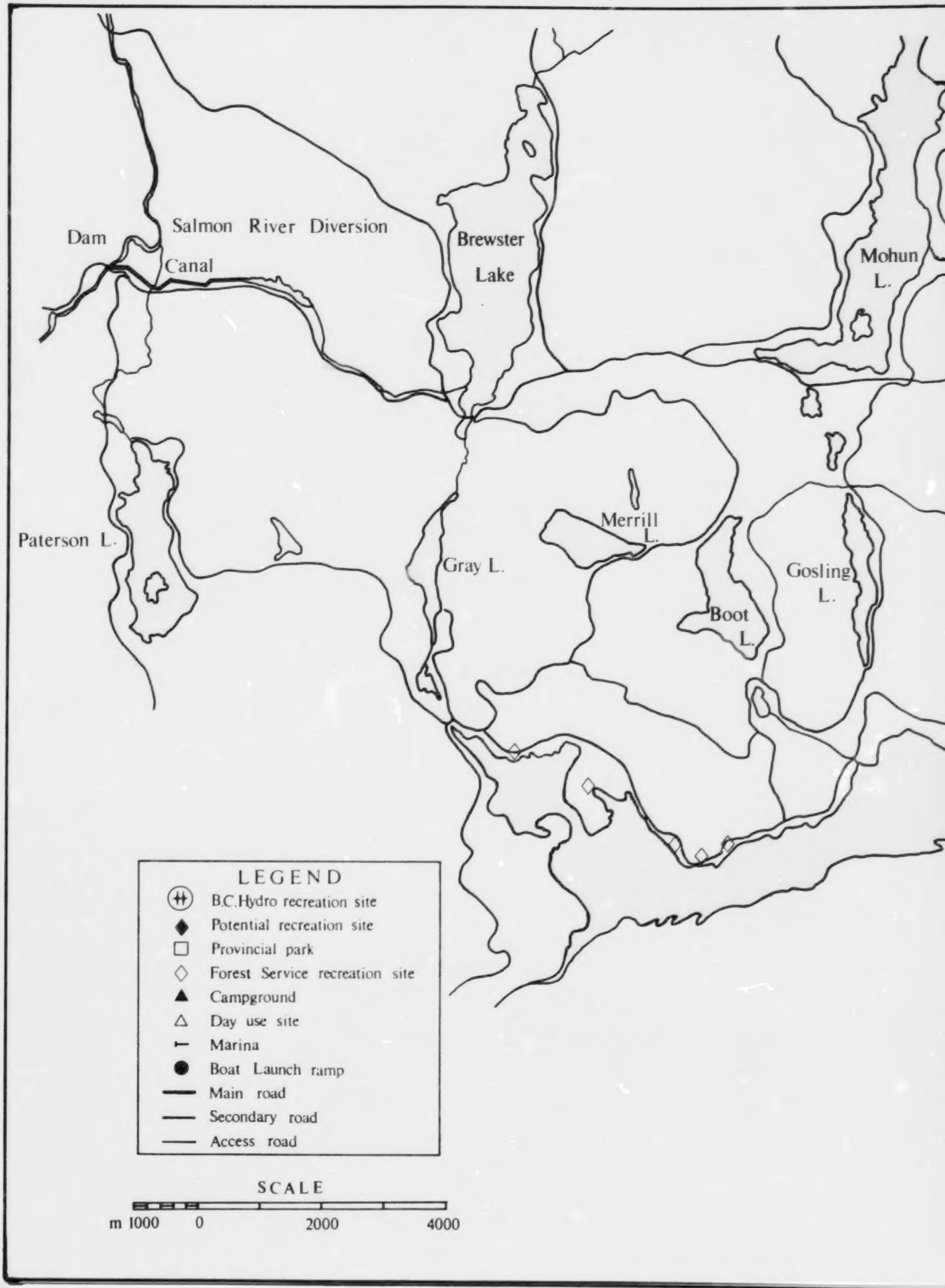
Sites along the northeastern part of the lake could be further developed for boating, camping and picnicking, if warranted by demand. However, more intensive recreational use would require costly debris removal and possibly beach construction.

B. C. Parks plans to develop a new boat launch, picnic sites, campgrounds and trails on Buttle Lake in Strathcona Park.

9.0 ISSUES

The effect of lake levels on recreational use in Strathcona Park is an issue.

Other development issues would include determination of recreational demand and appropriate facilities, and cost of reservoir clean-up.


Dam
Salmon River Diversion
Canal
Brewster Lake
Mohun L.
Paterson L.
Merrill L.
Gray L.
Gosling L.
Boot L.
LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
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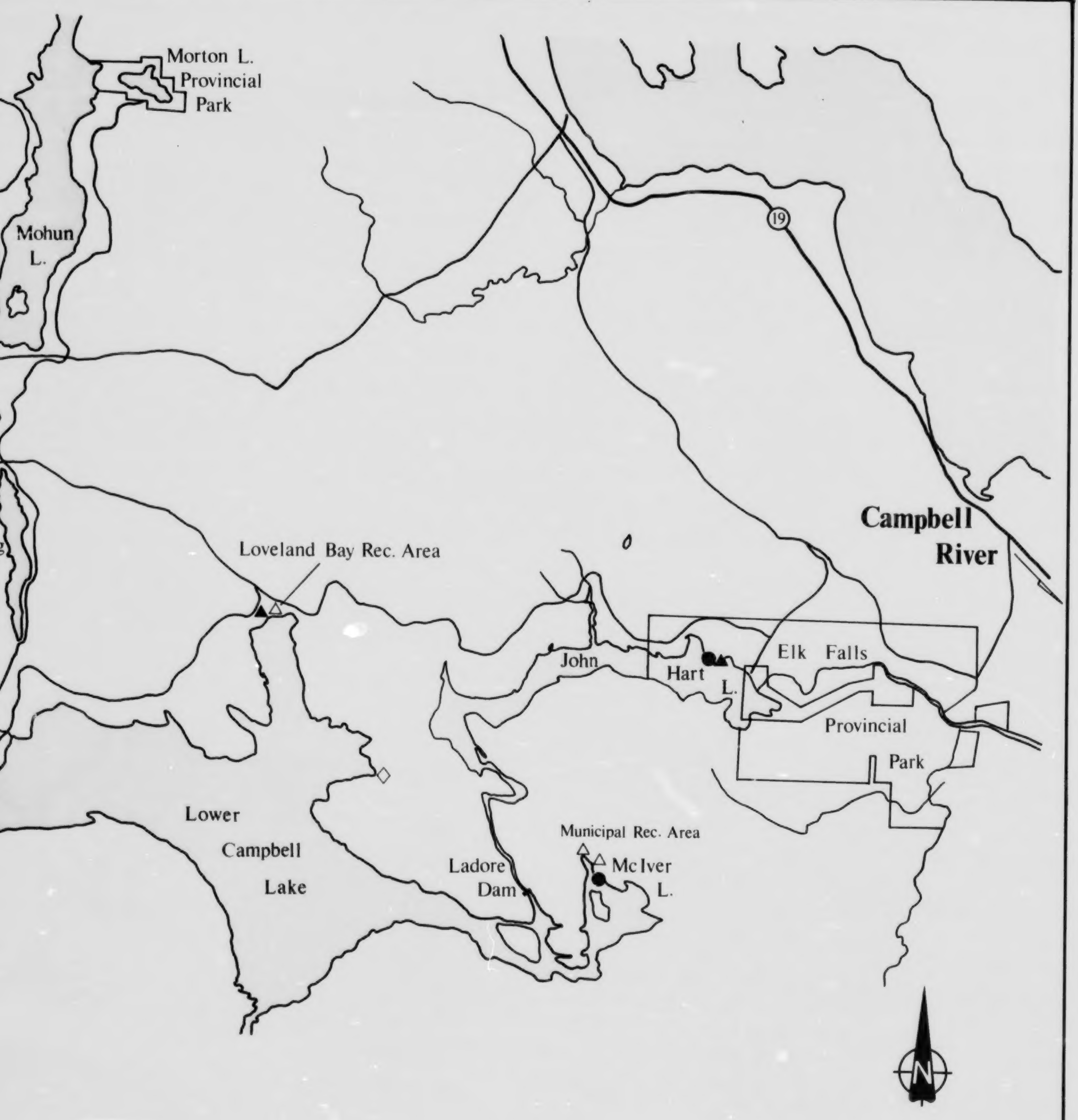


Salmon River Diversion Lower Campbell Lake

LOWER CAMPBELL LAKE

1.0 LOCATION

Lower Campbell Lake is located about 10 km west of Campbell River on the east coast of Vancouver Island.

The lake is accessible on the south shore by access roads branching off Highway 28 and on the north shore via mainline logging roads.

2.0 LAND STATUS

B. C. Hydro holdings are limited to the Ladore damsite and related facilities. The eastern end of Lower Campbell Lake and adjoining McIvor Lake lie within the District Municipality of Campbell River. The southern arm of the lake is within the Esquimalt and Nanaimo Railway Lands Grant. The remaining land on the lake is Crown land.

3.0 GENERATION FACILITIES

The 43 m high earthfill and concrete Ladore dam includes a 518 m tunnel which carries water to the generating station with a capacity of 54,000 kW. Reservoir drawdowns, averaging 5.5 m are normally gradual and coordinated with the needs of peak recreational use.

4.0 RECREATION PERSPECTIVE

Lower Campbell Lake (including McIvor Lake) is a heavy use recreational area with facilities including numerous Forest Service recreation sites, B. C. Parks Recreation Area, municipal day use areas and private recreational properties. The lake offers excellent fishing and adjacent lands have high capability to support ungulates. It also provides domestic water to Campbell River (via John Hart Lake) and water quality is a major concern. Lake debris and navigational hazards are low.

5.0 RECREATIONAL OPPORTUNITIES

The lake has high capability to support a variety of water-based recreational activities, and is noted for excellent fishing. Hunting and wildlife viewing are also possible on adjacent lands.

6.0 RECREATIONAL DEVELOPMENTS

The District Municipality of Campbell River provides a boat ramp, beach and picnic area on McIvor Lake. Private recreational properties have also been developed along McIvor Lake.

The Forest Service maintains eight recreation sites on Lower Campbell lake, seven of which are on the western half of the lake and support a circle canoe route which extends north of the lake.

B. C. Parks Loveland Bay Recreation Area provides camping, swimming and fishing.

7.0 USE

Lower Campbell Lake, and particularly McIvor Lake, are heavily used to the point that water quality for domestic purposes is a major concern.

8.0 DEVELOPMENT POTENTIAL

The lake has considerable resource potential for further recreational development but this will be subject to the concern for domestic water quality.

Some of the Forest Service sites north of the lake could be very popular if upgraded and better promoted to serve a larger regional market. The Comox-Strathcona Regional District has plans to establish a community recreation park on McIvor Lake.

Several potential recreation enhancement opportunities on Lower Campbell Lake, suggested by the Forest Service, are as follows:

- Stump removal within fifty metres off-shore from the seven existing Forest Service recreation sites located along the north shore of Lower Campbell Lake.

- Development of recreation facilities (picnic tables, one or two outhouses, metal fire rings) on B. C. Hydro property below the Strathcona Dam.

  This area is well used for camping, picnicking and fishing and is also a very popular starting point for those embarking on the Sayward Forest Canoe Route.

- Conversion of the existing facilities at the Orchard Meadow Forest Service Recreation Site on Fry Lake to accommodate disabled users.

- Expansion of the existing Big Bay Recreation Site from its current capacity of three vehicle units to six.

9.0 ISSUES

There is already a conflict, particularly on McIvor Lake, between recreational use and water quality for domestic use. Further recreational development on this lake system will be subject to the concern for maintaining high water quality. The Municipality of Campbell River has placed severe restrictions on the type of lakeshore development within its boundary.

SALMON RIVER DIVERSION

1.0 LOCATION

The Salmon River flows in a northerly direction from the heart of the Vancouver Island mountain range into Johnstone Strait on the east coast of Vancouver Island about 60 km north of Campbell River. The point of diversion is located about 42 km upstream of the Salmon River estuary. Access to the diversion is by Kelsey Bay/Campbell River Highway to the MacMillan Bloedel mainlink (14 km north of Campbell River), with a further 21 km on this road to the diversion. Alternate access (often washed out and rough) can be gained from Strathcona Dam by following 14 km of branch logging roads.

2.0 LAND STATUS

B. C. Hydro controls only the land on which it has facilities. Most land in the area is controlled by forest companies and the Crown.

3.0 GENERATION FACILITIES

Diversion facilities consist of a timber crib dam, concrete-lined canal and unlined rock cut. There is no reservoir or storage. Water is diverted a distance of 3,050 m into the Lower Campbell Lake reservoir via the Brewster Lake, Gray Lake, Fry Lake chain.

Fisheries regulations require that a flow of at least 100 ft^3/s be maintained at a point approximately 6.4 km above the confluence of the Memebay and Salmon rivers between 20 August and 15 November each year. At least 83 ft^3/s must flow at the same point for the rest of the year.

4.0 RECREATION PERSPECTIVE

Recreational use in the diversion area is low, consisting mainly of fishing, camping and car-top boating. Fisheries values in the Salmon River system are high, with good populations of anadromous and resident fish. Much of the valley provides good deer and elk habitat.

5.0 RECREATIONAL OPPORTUNITIES

Good opportunities exist for fishing, hunting and informal camping. Brewster and Gray Lakes on the diversion system are part of the existing Sayward Forest Canoe Route.

6.0 RECREATIONAL DEVELOPMENTS

Facilities are limited to informal Forest Service and forest company maintained campsites scattered throughout the Sayward Provincial Forest area.

7.0 USE

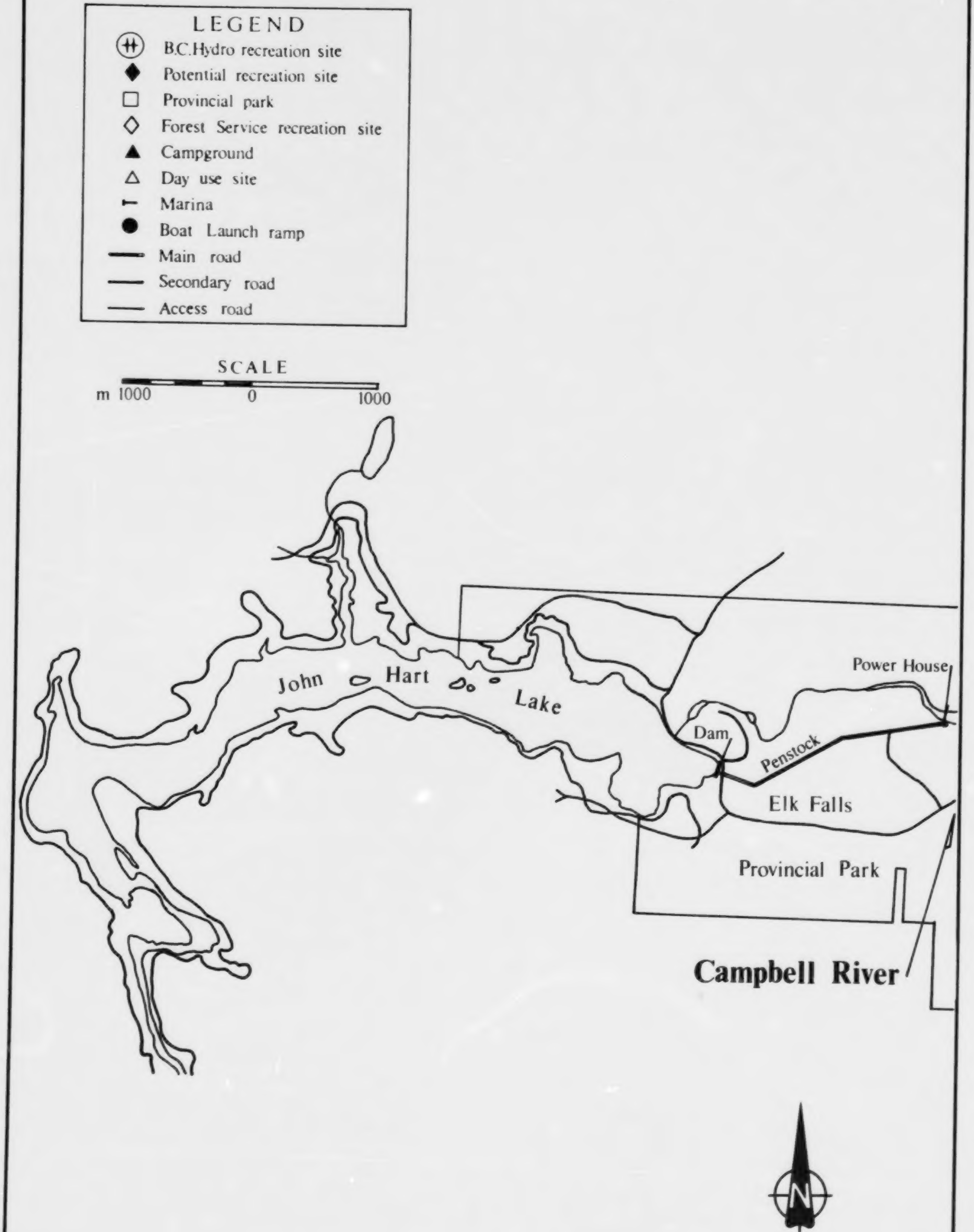
Recreational use in the diversion area is low. However, Brewster and Gray Lakes sustain significant use as part of the Sayward Forest Canoe Route.

8.0 DEVELOPMENT POTENTIAL

This area is considered as having little potential for recreational development. However, the canoe route would be enhanced if floating log debris were removed from the south ends of Brewster and Gray Lakes.

9.0 ISSUES

Since the removal of an impasse on the Lower Salmon River now allows anadromous fish to reach the diversion dam, there may be pressure on B. C. Hydro to provide a fish passage at the dam.



John Hart Lake

JOHN HART LAKE

1.0 LOCATION

John Hart Lake is located about 8 km inland from Campbell River on the east side of Vancouver Island. Access to the reservoir is by paved road from Campbell River. Main logging roads provide access to the north and south shores. Vehicle access to the generating facilities is restricted from 4:00 p.m. until 8:00 a.m. daily.

2.0 LAND STATUS

B. C. Hydro owns the land around the dam and generating facilities. Surrounding this land and extending some distance along the north shore is Elk Falls Provincial Park. South shore land is within the District Municipality of Campbell River. The remaining land to the west and north is Crown-owned.

3.0 GENERATION FACILITIES

The John Hart generating facilities consist of a 30.5 m high dam, spillway, three penstocks (each about 1830 m long) and a power house with 120,000 kW capacity.

There is virtually no storage in the reservoir which has a drawdown of only 0.6 m. A minimum flow of 1200 ft^3/s is maintained in the Lower Campbell River for fisheries purposes. Rapid change in river levels and flow require warning signs and sirens to alert the public.

4.0 RECREATION PERSPECTIVE

John Hart Lake provides a variety of natural, scenic landscapes with considerable fish and wildlife values. Elk Falls Provincial Park is popular for day use and camping but further recreational development on the lake is severely restricted in order to maintain high water quality for Campbell River municipality.

5.0 RECREATIONAL OPPORTUNITIES

Recreational opportunities at the lake include camping, picnicking, boating, swimming, hiking, fishing, hunting, sight-seeing and nature appreciation.

6.0 RECREATIONAL DEVELOPMENTS

Facilities at Elk Falls Provincial Park include 121 campsites for tents and RV's, 10 picnic sites, a boat launch area, and sani-station.

7.0 USE

Day use at Elk Falls Park is heavy with 18,223 party-days recorded in 1984. Camping facilities are under-utilized with 7,458 party-nights recorded in 1984.

8.0 DEVELOPMENT POTENTIAL

While the resource potential for enhanced development may be considerable, actual development is severely restricted by the concern for domestic water quality.

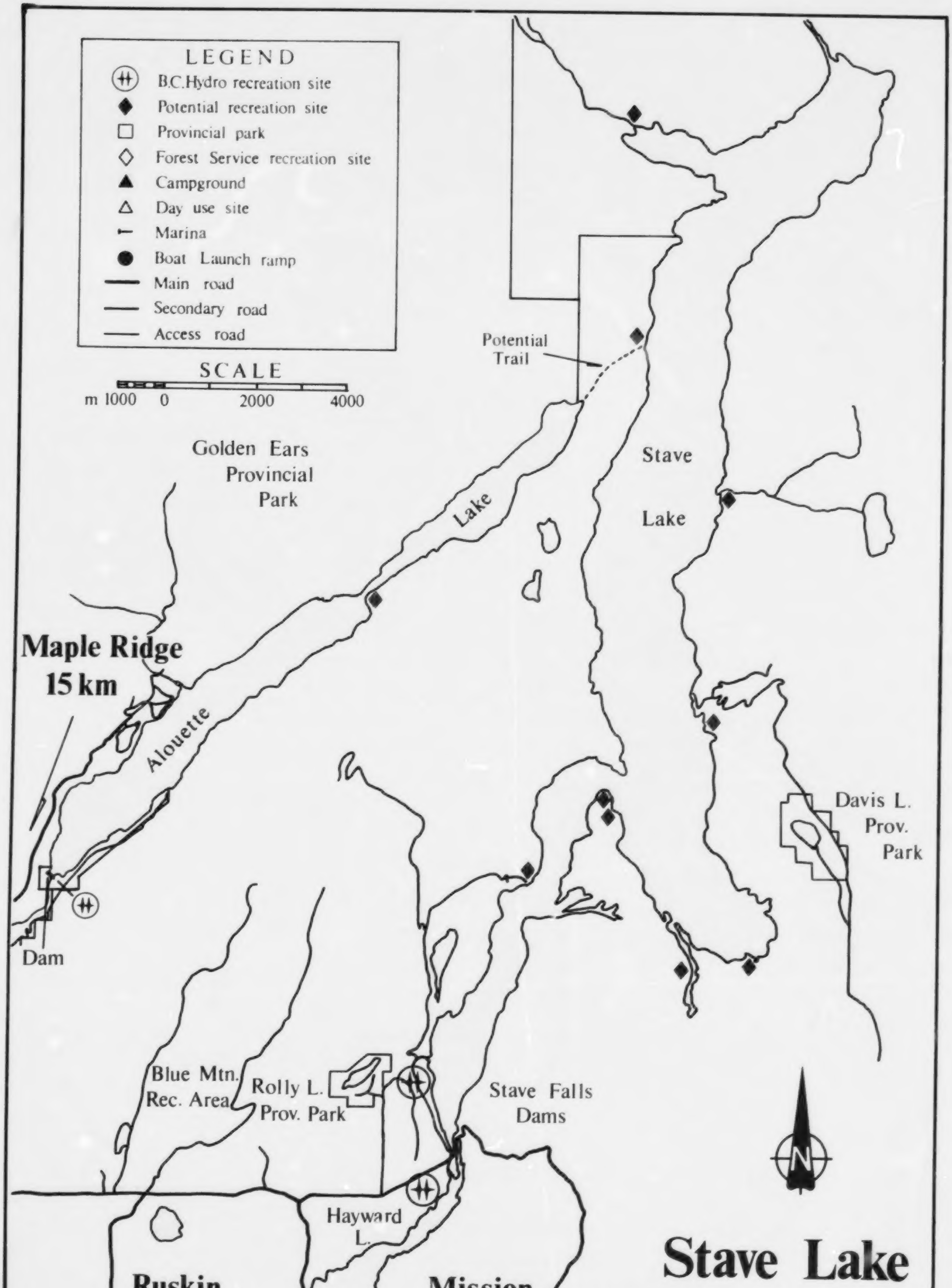
Elk Falls Provincial Park plans to expand day use facilities and improve camping facilities.

9.0 ISSUES

Conflict between recreational use and concern for water quality already exists, and this will be the major issue determining the nature and extent of any further recreational development or use of the lake.

Campbell River has placed severe restrictions on lakeshore development on its shoreline in favour of preserving high domestic water quality.

Periodic spilling of water from John Hart Dam poses a hazard to public use of the river.



Stave Lake
Alouette Lake

ALOUETTE LAKE

1.0 LOCATION

Alouette Lake is located north of the Fraser River, about 15 km east of Maple Ridge.

Public access to the north shore is provided by the paved road that serves Golden Ears Provincial Park. A gated B. C. Hydro access road parallels the Alouette River to the lake's southern shoreline. Forestry roads provide access to the Pine Lake Correctional Camp, located at the upper end of the lake.

2.0 LAND STATUS

The entire northern shoreline of Alouette Lake and a portion of the southern is included in Golden Ears Provincial Park. Other Crown lands surrounding the lake have been reserved for forestry or institutional uses. No privately-owned shoreline lands exist.

B. C. Hydro owns approximately 32 ha surrounding the Alouette Dam at the south end of the lake and a 140 ha parcel at the north end of the lake incorporating the diversion tunnel and Alouette powerhouse.

3.0 GENERATING FACILITIES

Alouette is the first reservoir in the Alouette-Stave-Hayward generating system. The 19 m high earthfill dam is located at the southern end of the lake. Water is diverted by tunnel at the north end of the lake to the powerhouse on Stave Lake.

The reservoir has an average drawdown of 13.7 m.

4.0 RECREATION PERSPECTIVE

Alouette is an attractive Lower Mainland lake which currently receives intensive recreational use, originating at Golden Ears, one of the highest attended provincial parks.

The B. C. Hydro and Parks land on the southern shore attract large numbers of visitors but remain largely undeveloped as a result of limited access.

The lake is generally free of floating and submerged wood debris, however the removal of stumps and snags is ongoing.

This lake and its surroundings have high capability for further recreational development and use. This development potential will be influenced by increased access provided by the Ministry of Forests to the lake's southern shoreline.

5.0 RECREATIONAL OPPURTUNITIES

Recreational opportunities at the lake including boating, fishing, swimming, beach activities, wind-surfing, camping, picnicking, hiking and horseback riding. Use of ATV's is also common in this area.

B. C. Hydro's dam site facility provides for primitive camping, along with the above-mentioned water-based activities.

6.0 RECREATIONAL DEVELOPMENTS

Golden Ears Provincial Park contains two large campgrounds with a total of 350 campsites plus an extensive day-use area with parking and picnicking. There are also hiking and riding trails, group campground wilderness campsites, boat launch and sani-station.

The B. C. Hydro recreation area east of the dam provides an information sign, pit toilet, and grassed open shorefront land.

7.0 USE

Golden Ears Park attendance in 1987 was as follows:

- Camping	28,120 party nights
- Day Use	105,945 party days

Use data for the B. C. Hydro site are unavailable.

8.0 DEVELOPMENT POTENTIAL

Facilities at Golden Ears Park are being enhanced to include flush toilets and showers, a new change house, and a new over flow area.

Stocking of Cutthroat trout by the Fish and Wildlife Branch is ongoing.

The existing popularity of Golden Ears Park combined with the growing Lower Mainland population suggest the expansion of park facilities east of the dam site.

Although B. C. Hydro's land base at the dam is limited, the site has potential for intensive recreational development.

Expansion of facilities at a higher standard of development, and shoreline improvements, are being considered by Hydro recreation staff.

A Forest Service Recreation reserve on the south shore just west of the narrows has considerable development potential for camping and beach use. Access can be gained via Burma Road on the west side of Stave Lake.

There is a good opportunity to provide a hiking trail from the east end of Alouette Lake to a possible recreation site on Stave Lake.

9.0 ISSUES

Issues include:

1. Vehicular access to B. C. Hydro property and south shore provincial parkland. B. C. Parks believes it is time to develop this access.
2. Reservoir drawdown during period of peak recreational use.
3. Floating debris which is escaping from deteriorated boom at upper end of lake.
4. Developing Parks and B. C. Hydro lands in a complementary manner for maximum public benefit.
5. Safe usage of the dam forebay.

STAVE LAKE

1.0 LOCATION

Stave Lake is located north of the Fraser River midway between Mission and Maple Ridge. It is a large reservoir with two major arms at the south end.

Access to the lake is via the Lougheed Highway and the paved Dewdney Trunk Road.

The southwest arm is accessible by a gravel road which parallels the western shoreline. Limited access logging roads extend northward some distance along the eastern shoreline of the lake. The northern end of the lake is accessible by boat or plane only.

2.0 LAND STATUS

Most of the land surrounding Stave Lake is Crown-owned, with a major portion allocated to Whonnock Lumber by a Timber Sale Harvesting License. The Mount Judge Howay Recreation Area borders the lake to the northwest and the Cascade Creek Recreation Area borders the southeast arm.

B. C. Hydro owns large blocks of land at the Alouette Diversion located at the midwestern shore of Stave Lake, the southwest arm, and the southeast arm.

Whonnock Lumber leases a 17.5 ha log outhaul site from B. C. Hydro on the southwest arm.

There is an additional large private holding on the southeast arm. The District of Mission has a Tree Farm License adjoining the southwest part of the reservoir.

3.0 GENERATION FACILITIES

Generation facilities at Stave Falls include a sluice dam functioning as a spillway and reservoir level control, and an intake dam and powerhouse with a 52,500 kW capacity. Average annual reservoir drawdown is 8.9 m.

4.0 RECREATION PERSPECTIVE

The proximity of Stave Lake to the Lower Mainland, combined with its attractive features, make this a popular recreation area. Existing facilities are experiencing increased use, and future demand will lead to expanded facilities. Current facility and aesthetic improvements, including shoreline cleanup, will further increase this area's popularity. Wind, wave action, snags and stumps are limitations to recreation. Debris clearing and shoreline cleanup are ongoing.

5.0 RECREATIONAL OPPORTUNITIES

Recreational opportunities currently being developed include camping, picnicking, boating, environmental studies, group activities and outdoor skill development.

6.0 RECREATIONAL DEVELOPMENTS

Developed facilities at B. C. Hydro's Stave Lake boat launch located on Burma Road 1 km north of Dewdney Trunk Road include:

1 double-wide boat launch ramp
30 vehicle parking spaces
2 pit toilets

Facilities at Hydro's 50 ha group campground just north of the boat launch include:

- lodge building with 10 vehicle parking spaces
- group campsite with:
    - 9 vehicle parking lot
    - 6 tent pads
    - 2 pit toilets
    - 1 hand pump
    - picnic shelter
    - trail system
    - fire circles

The Forest Service is currently developing a small recreation site with picnic tables and a pit toilet at Cypress Point mid way along the eastern shore of the lake.

7.0 USE

Stave Lodge received 744 user-days in the 3 months from April 15 to July 15, 1988. The boat launch received 31,835 user-days in 1987.

8.0 DEVELOPMENT POTENTIAL

Further expansion of the B. C. Hydro camping facilities and boat launch parking could be considered should this be warranted by demand.

Several recreational developments on the lake are being considered by various interests, as follows:

1. The Forest Service is developing a pedestrian and boat access day use area (with over-night parking permitted) at Cypress Point. (The Dewdney-Alouette Regional District wishes to have this site developed for higher level use.)

2. The Forest Service plans a trail between the east end of Alouette Lake and Stave Lake, with a boat access recreation site on Stave Lake.

3. The Forest Service plans to provide a boat access recreation site with foreshore trail at the point between the east and west arms.

4. The Forest Service recognizes the high recreational potential of the west shore site (UREP) near the corrections camp. (The District of Mission is also interested in the development of this site.)

5. B. C. Parks plans to establish a boat ramp and picnic area at Lost Creek near Davis Lake Provincial Park.

6. B. C. Parks plans to provide a wilderness camping area at Clearwater Bay with water supply, pit toilets, picnic tables and garbage collection.

7. The Dewdney-Alouette Regional District plans to take over the Cascade Creek Recreation Area from the Ministry of Forests. The

Region is developing a site at Cascade Falls and has plans for a trail to a picnic site on Stave Lake.

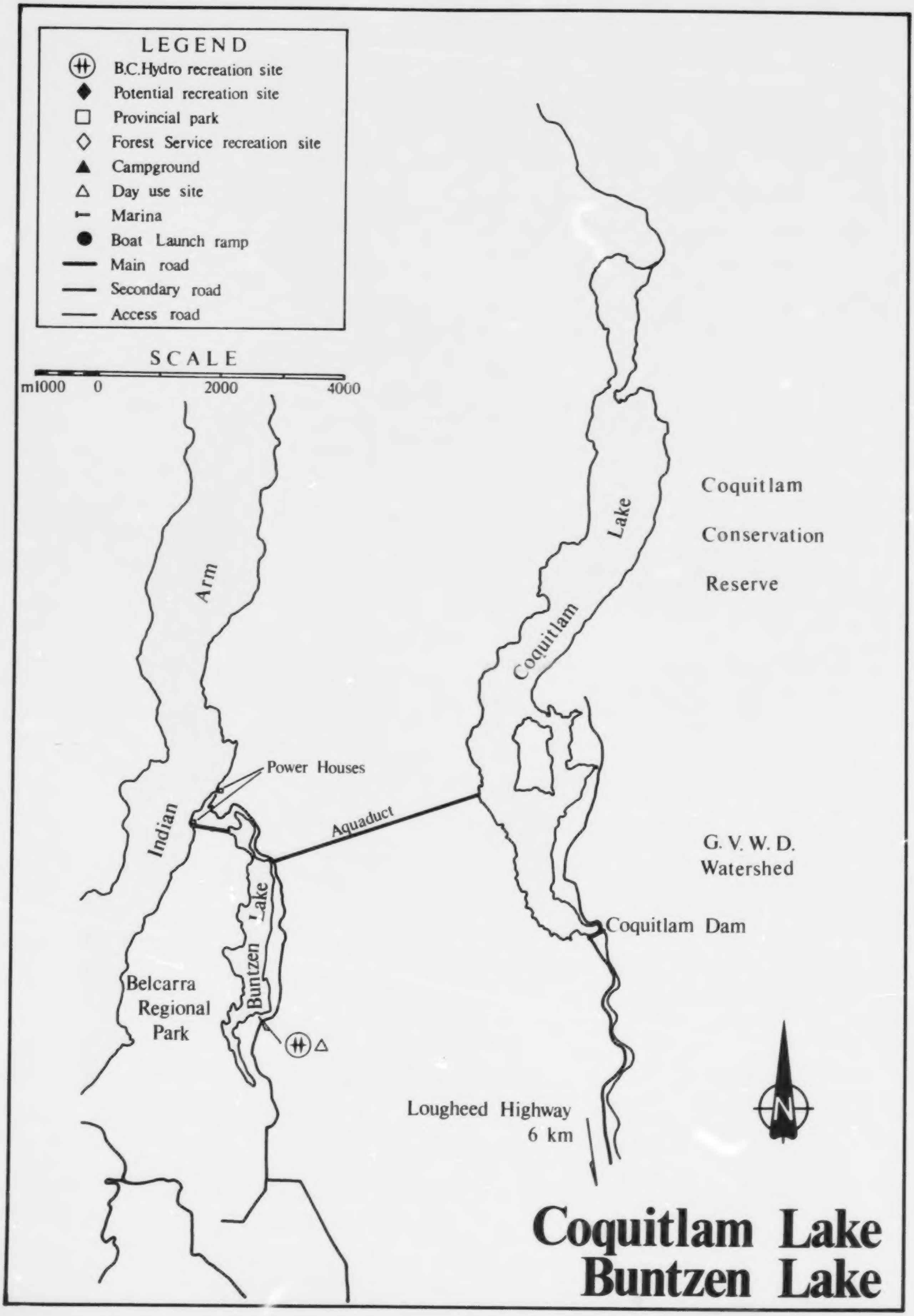
8. The Regional District has considerable interest in the Cardinalis Creek area on B. C. Hydro land on the east arm. This is an area of significant ecological interest and varied bird life, and has potential for walking, picnicking, nature study and wildlife viewing.

9.0 ISSUES

Debris accumulation, submerged deadheads and high winds are significant hazards to recreational use of this lake.

Industrial use of B. C. Hydro's boat ramp is a concern. Industrial use of the lake can affect recreational use.

Many parties are involved in recreational developments on this lake and a coordinated effort is required to ensure optimal provision for recreational needs.



Coquitlam Lake
Buntzen Lake

BUNTZEN LAKE

1.0 LOCATION

Buntzen Lake is located just north of Ioco, approximately 30 km from downtown Vancouver.

Access to the area is from the south via Port Moody and Ioco.

2.0 LAND STATUS

B. C. Hydro owns the land bordering Buntzen Lake. The penstock and power houses on Indian Arm are situated on land owned by B. C. Hydro.

Private holdings are located at Anmore, south of the Hydro property and at Buntzen Bay, immediately north of the power plants.

The GVRD's Belcarra Regional Park lies southwest of B. C. Hydro property.

3.0 GENERATING FACILITIES

The water from Buntzen Lake is diverted through a penstock and tunnel to two powerhouses located on Indian Arm.

Buntzen Lake receives water from Coquitlam Lake through a tunnel connecting the two lakes.

4.0 RECREATION PERSPECTIVE

The attractive natural features, proximity to large urban areas and popularity of existing facilities make Buntzen Lake a suitable area for the consideration of expanded recreational use.

5.0 RECREATIONAL OPPORTUNITIES

The natural characteristics of the area and the developed facilities provide opportunities for swimming, picnicking, hiking, viewing, canoeing, fishing and horseback riding. B. C. Hydro manages approximately 300 ha of its land at Buntzen Lake for public recreation. The Buntzen Lake basin serves as a staging area for back-country hikes on Eagle Ridge and Buntzen Ridge.

6.0 RECREATIONAL DEVELOPMENTS

B. C. Hydro has developed a major day-use picnic beach at the south end of Buntzen Lake comprising:

- 250 m of developed beach
- 760-car parking lot
- well and hand pump
- 8-unit vault toilet building
- 100 picnic tables
- cartop boat launch and deck
- warden's office, compound and workshop.

A small walk-in picnic area consisting of a 50 m beach, four picnic tables and a pair of pit toilets has been developed at the north end of Buntzen Lake.

Approximately 25 km of hiking and bridle trails have been constructed on B. C. Hydro and adjacent Crown lands.

An equestrian staging area consisting of a ten-vehicle parking area, hitching rail and trail information have been developed.

7.0 USE

Annual attendance recorded at Buntzen Lake averages in excess of 200,000 visitors per year. For the past 3 years attendance has been as follows:

1985 - 246,056 visitor-days
1986 - 219,907 visitor-days
1987 - 227,484 visitor-days

Equestrian use and back-country use of the surrounding areas is not specifically recorded.

8.0 DEVELOPMENT POTENTIAL

There is potential for expansion of day-use facilities at the south end of Buntzen Lake (see Issues below).

9.0 ISSUES

Vehicle Congestion - On Sunnyside Road and Ioco Road. Coordination of efforts with GVRD who operate Belcarra Regional Park and with Port Moody and RCMP departments.

Expansion of Facilities - The Coquitlam-Port Moody area is experiencing rapid growth in population and residential development. The demand for regional recreational facilities is expected to continue to grow. Buntzen Lake has not been developed to its full potential as a day-use swimming and picnic area. A coordinated effort by B. C. Hydro and the GVRD will be required to realize the full potential of the valuable recreational resources contained in the Buntzen-Belcarra (Sasamat) area.

COQUITLAM LAKE

1.0 LOCATION

Coquitlam Lake lies within the Greater Vancouver Water District (GVWD) watershed about 10 km north of the Lougheed Highway in Port Moody.

2.0 LAND STATUS

B. C. Hydro owns land around the dam and tunnel. The remainder of the land in the vicinity is held by the GVWD.

Public access to the area is totally restricted to protect the watershed.

3.0 GENERATION FACILITIES

Coquitlam Lake is impounded by a 30 m high, 370 m long rock and earthfill dam. Water withdrawn from the lake by agreement with the GVWD is diverted through a 3 km tunnel to Buntzen Reservoir.

There are no generating facilities on the lake.

4.0 RECREATION PERSPECTIVE

The Coquitlam Conservation Reserve precludes recreational use of the reservoir at this time.

5.0 RECREATIONAL OPPORTUNITIES

See 4.0 above.

6.0 RECREATIONAL DEVELOPMENTS

There is no recreational development on the reservoir.

7.0 USE

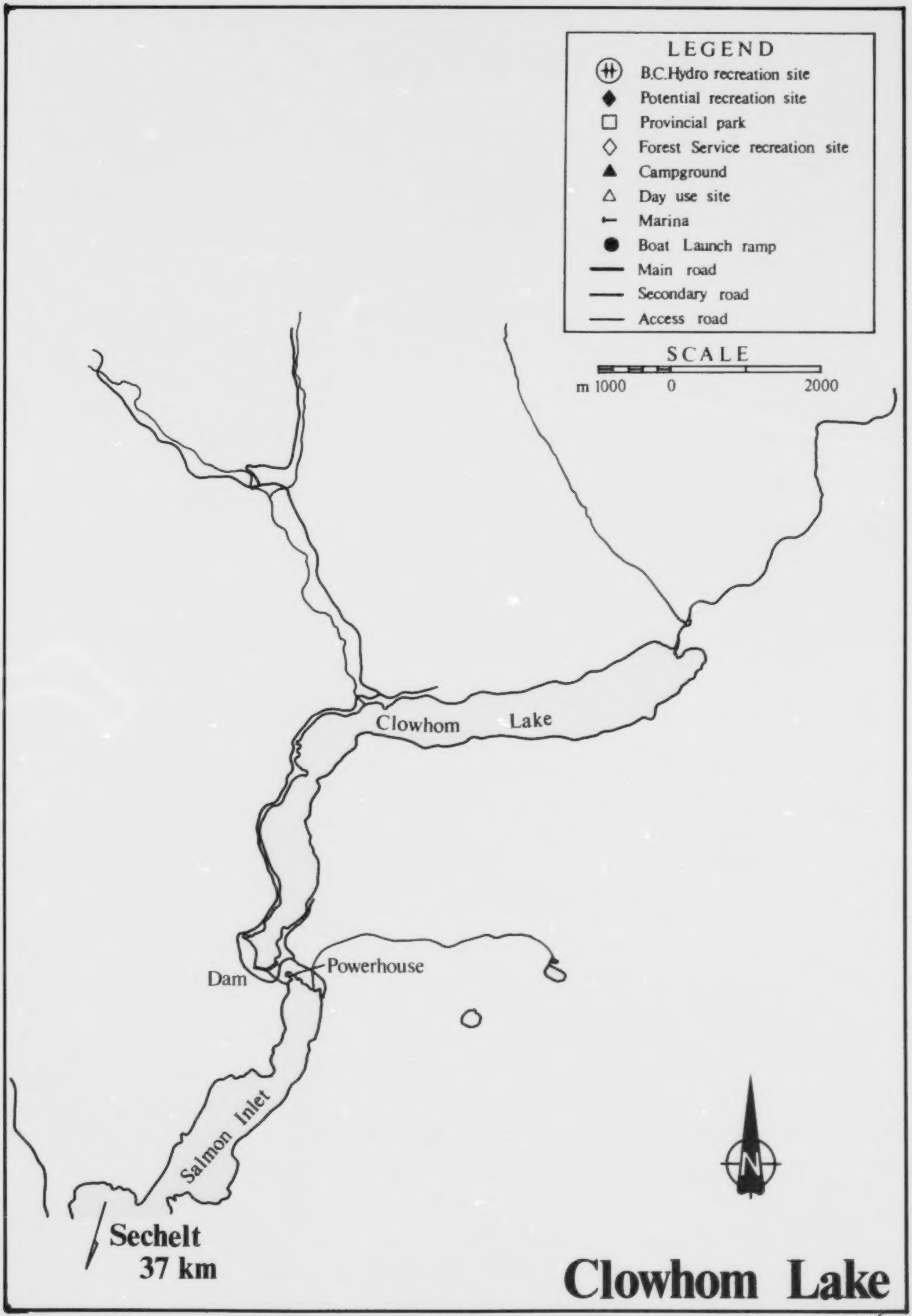
See 4.0 above.

8.0 DEVELOPMENT POTENTIAL

See 4.0 above.

9.0 ISSUES

The Coquitlam Conservation Reserve restricts reservoir use to water storage and domestic water supply.


LEGEND
B.C.Hydro recreation site
◆ Potential recreation site
□ Provincial park
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▲ Campground
△ Day use site
Marina
● Boat Launch ramp
Main road
Secondary road
Access road
SCALE
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Clowhom Lake
Powerhouse
Dam
Salmon Inlet
Sechelt
37 km
N
Clowhom Lake

CLOWHOM LAKE

1.0 LOCATION

Clowhom Lake lies in a steep-sided valley at the head of Salmon Inlet, at the edge of the rugged Tantalus Range, 37 km north of Sechelt.

Access to the area is limited to float-plane or boat, with navigation up Sechelt Inlet made difficult by severe tidal currents at Skookumchuck Narrows. Distance from Sechelt via the over-land crossing to Porpoise Bay is 37 km. Water distance from Sechelt is 110 km. Logging roads in the Lower Clowhom valley are maintained by Weldwood.

2.0 LAND STATUS

Most of the land around Clowhom Lake is Crown-owned. B. C. Hydro owns about 50 ha adjacent to the generation facilities, and 8 ha near the north end of the reservoir. The Columbia Steamship Company owns L. 2030, containing a private fishing lodge called the "American Estate", and a portion of L. 1901.

Weldwood leases a portion of L. 1901, and access roads, from B. C. Hydro. A Weldwood Timber Sale Harvesting licence covers the Clowhom watershed.

Two cabins on the reservoir have Ministry of Forests and Lands Special Use Permits.

3.0 GENERATION FACILITIES

The Clowhom generation facilities provide peaking power for the B. C. Hydro grid as well as standby power for the Sechelt-Powell River area. A 17 m high concrete dam with a crest length of 460 m provides water through a 4.3 m diameter penstock to the 30,000 kW powerhouse 53 m below.

Spillway releases, which often occur after heavy rainfall, affect pools used for swimming downstream of the spillway. The reservoir is usually at full pool over the summer months.

4.0 RECREATIONAL PERSPECTIVE

The scenic attributes of this steep-sided, rocky valley, as well as protected waters and good reservoir fishing, make this area a popular stop for recreational boaters. The remoteness of the site limits broader recreational use. Spilling and debris in the reservoir present hazards to recreational use.

5.0 RECREATIONAL OPPORTUNITIES

The lake provides the opportunity for good fishing.

6.0 RECREATIONAL DEVELOPMENTS

Other than two private cabins, there are no recreational facilities on the lake. A private fishing lodge is located on Salmon Inlet below the dam.

7.0 USE

A moderate and steady amount of fishing occurs on the lake.

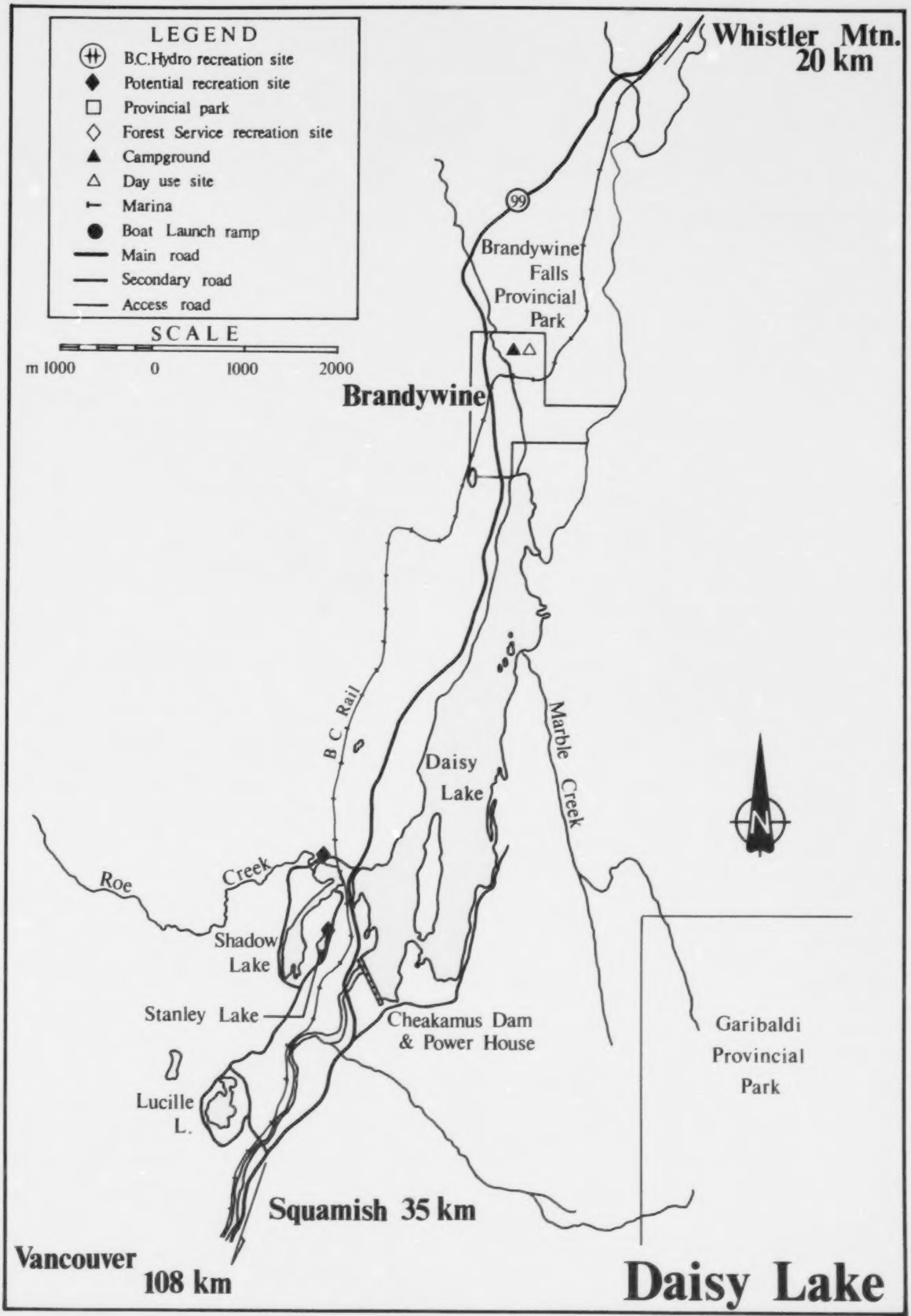
8.0 DEVELOPMENT POTENTIAL

The Forest Service has a UREP on the north side of the lake but has no plans to develop it.

9.0 ISSUES

Reservoir spilling and debris are matters for concern should further use and development occur.

There is no expressed demand for development of facilities.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Brandywine Falls Provincial Park
Brandywine
B C Rail
Marble Creek
Daisy Lake
Roe Creek
Shadow Lake
Stanley Lake
Cheakamus Dam & Power House
Lucille L.
Garibaldi Provincial Park
N
Squamish 35 km
Vancouver 108 km
Daisy Lake

DAISY LAKE

1.0 LOCATION

Daisy Lake is 108 km north of Vancouver and 20 km south of Whistler. Highway 99 is the main access corridor bisecting B. C. Hydro lands along the west shore of Daisy Lake. B. C. Rail also traverses B. C. Hydro property.

2.0 LAND STATUS

B. C. Hydro has extensive holdings adjoining the southern end of the reservoir, and owns part of the island in Daisy Lake. Hydro also owns considerable land west of Highway 99, including Roe Creek and Stanley Lake. The former B. C. Hydro Daisy Lake recreation areas were located on this property. Development is restricted by a provincial government land freeze to protect against the possibility of a catastrophic slide from the "Barrier" in Garibaldi Provincial Park.

Brandywine Falls Provincial Park is situated just north of Daisy Lake. The Pinecrest recreation subdivision borders B. C. Hydro property west of the lake and there is a private holding adjacent to B. C. Hydro land on the east side of the lake. The remaining land around the lake is Crown-owned.

3.0 GENERATION FACILITIES

The Cheakamus earthfill and gravel dam is 30 m high and 615 m long. Water is diverted into an 11 km long tunnel to two generators on the Squamish River.

Daisy Lake is subject to rapid drawdown in response to energy needs and preparation for high watershed runoff. The design drawdown is 15 m, with the reservoir commonly varying from 4.5 m to 7.5 m below full pool level.

4.0 RECREATION PERSPECTIVE

Daisy Lake and the associated B. C. Hydro lands border the busy recreational travel corridor to the Whistler-Blackcomb area. The lake itself is popular for fishing and nearby Garibaldi and Brandywine Falls Provincial Parks experience heavy recreational use.

B. C. Hydro property fronting on Daisy Lake, and also those lands west of the highway, contain suitable sites for camping and picnicking. These areas were previously developed by Hydro for recreation prior to being closed as a result of the "Barrier" related provincial land freeze. The Hydro properties have been posted "No Tresspassing" but, nevertheless, recreational use continues at a level where management is required.

Various recreational activities, particularly camping and picnicking, could be re-established in this high demand area subject to concerns about a potential land slide and the operating mode of the reservoir.

Limitations to use and development on Daisy Lake include debris, poor boater access and lack of suitable shoreline destination points.

5.0 RECREATIONAL OPPORTUNITIES

Daisy Lake is currently used for fishing, picnicking and camping, despite restricted parking areas.

Prior to the provincial land freeze, minimally developed campsites existed adjacent to Stanley Lake, on the north side of Roe Creek near its entry into Shadow Lake, and on the east side of Shadow Lake near the canal link with the main reservoir. A picnic day use area was located on the west side of Daisy Lake immediately north of the canal bridge on Highway 99.

6.0 RECREATIONAL DEVELOPMENTS

Developments which existed prior to the land freeze were described in Section 5.0 above.

Brandywine Falls Provincial Park, just north of Daisy Lake, provides parking for 100 cars, 15 campsites, two pit toilets, a viewpoint, picnic tables, swimming, trails and cross-country skiing.

7.0 USE

Recreational demand in this area is high and far exceeds supply. In 1986 Brandywine Falls Park accommodated 11,333 party days and 580 party nights.

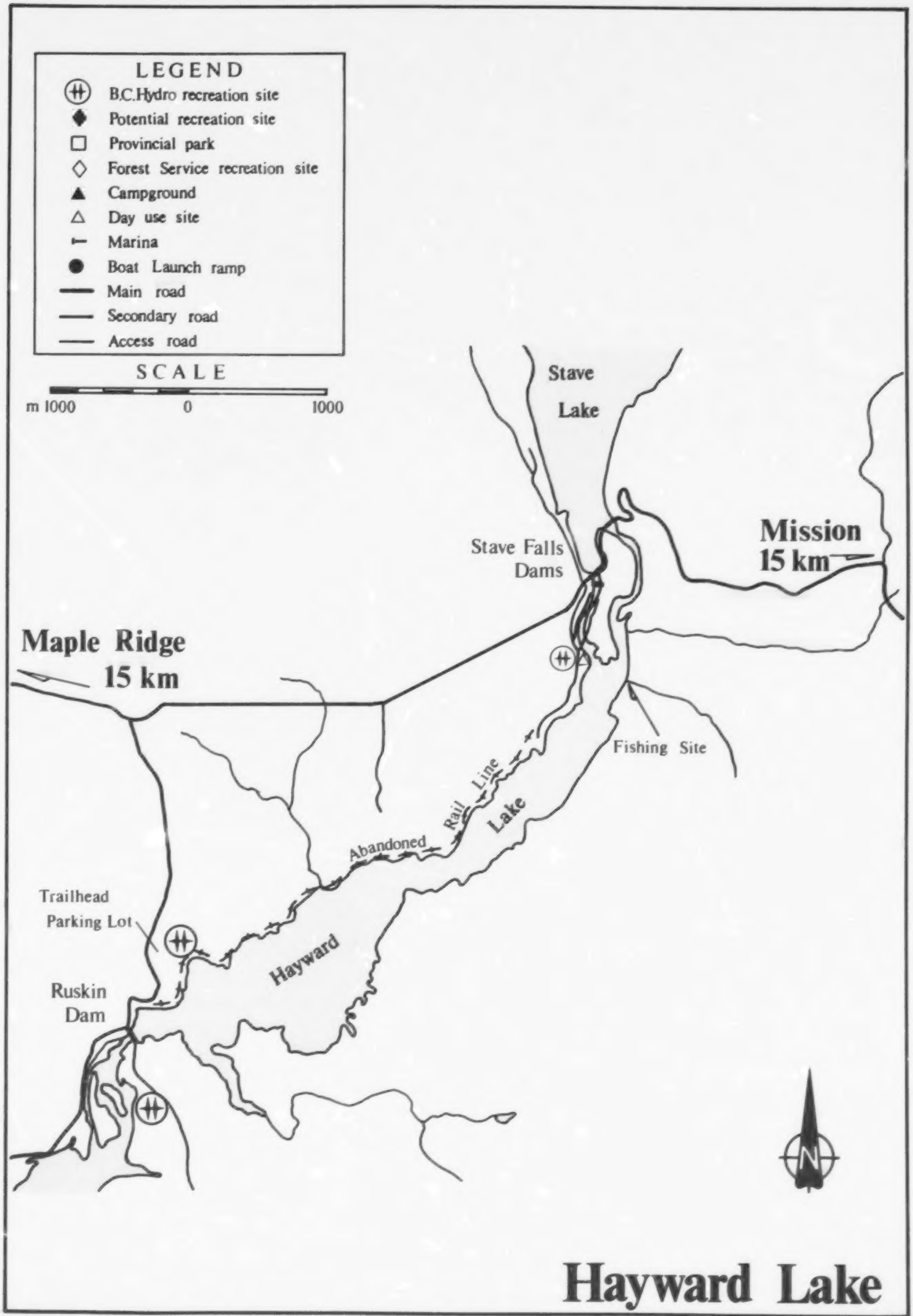
8.0 DEVELOPMENT POTENTIAL

The attractive surroundings, large water area and available B. C. Hydro land, in an area of heavy recreational use and travel, provide an opportunity for substantial recreational development at Daisy Lake and on nearby B. C. Hydro property. Suitable sites exist for both day use and overnight facilities, and there is substantial demand for each. The proximity to Whistler, which is increasing in popularity as a yearround recreation area, suggests that this location could be considered for a fully-serviced campground and R-V facility for visitors to that area.

9.0 ISSUES

The "Barrier" hazard and reservoir operation are concerns in developing recreational use. The interests of private recreation operators, nearby provincial parks and the intentions of local government must be given careful consideration in the process of recreational development of this area.

Ongoing, unregulated recreational activity in the Daisy Lake area creates concern for fire protection and may also pose a health hazard.


LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
m 1000
0
1000
Stave Lake
Mission 15 km
Stave Falls Dams
Maple Ridge 15 km
Fishing Site
Abandoned Rail Line
Lake
Trailhead Parking Lot
Hayward
Ruskin Dam
N
Hayward Lake

HAYWARD LAKE

1.0 LOCATION

Hayward Lake, a small reservoir situated within the District of Mission, lies directly south of the Stave Falls Dam. Access to the lake is provided by Dewdney Trunk Road to the north and Lougheed Highway No. 7 and secondary paved roads to the south.

2.0 LAND STATUS

The principal landowner at Hayward Lake is B. C. Hydro. Some of the land on the east side of Hayward Lake is Crown-owned, a portion of which is included in the Mission Tree Farm License. Areas west and south of the lake are residential in nature, and incorporate both trailer court developments and larger rural acreages. The Langley Indian Band owns four reserves downstream of Ruskin Dam.

3.0 GENERATING FACILITIES

Hayward Lake is the third and final reservoir in the Alouette-Stave-Hayward generating system. The 5.6 km long reservoir is created by the 59 m high Ruskin Dam. The powerplant capacity is 105,600 kW.

Average annual reservoir drawdown is 7.9 m with daily fluctuations ranging within 1.7 m. Water levels are generally high in the summer.

4.0 RECREATION PERSPECTIVE

Hayward Lake is an attractive area within an hour-and-a-half drive of Vancouver. The popular Rolley Lake Provincial Park is nearby. Varied features in the area have resulted in development of a railway trail, river front fishing site and lakeside facilities with a limited beach.

This is a high demand area with use levels rising as the facilities become better known. Future expansion of facilities will depend upon use levels which are expected to increase.

5.0 RECREATIONAL OPPORTUNITIES

Opportunities currently developed include fishing, hiking, picnicking, swimming, beach activities, wildlife viewing and sightseeing.

6.0 RECREATIONAL DEVELOPMENTS

A day use area at the north end of Hayward Lake offers:

30 m developed beach
90 parking spaces
picnic area/ grassed open space
1 water tap
2 pit toilets
7 km trail system

The 6 km Railway Trail connects the "north beach" area to undeveloped shoreline use areas at the south end of the lake where minimal recreation facilities are provided.

The Railway Trailhead has a seven-vehicle parking lot and a 0.5 km trail which connects to the Railway Trail.

The Ruskin fishing site on the Stave River has a 20-car parking lot and one pit toilet.

7.0 USE

Attendance figures at the Hayward Lake day use area are as follows:

1985	38,420 visitor days
1986	52,218 visitor days
1987	41,221 visitor days

Ruskin fishing site attendance in 1987 was 26,238 visitor days.

No use data are available for the Railway Trailhead.

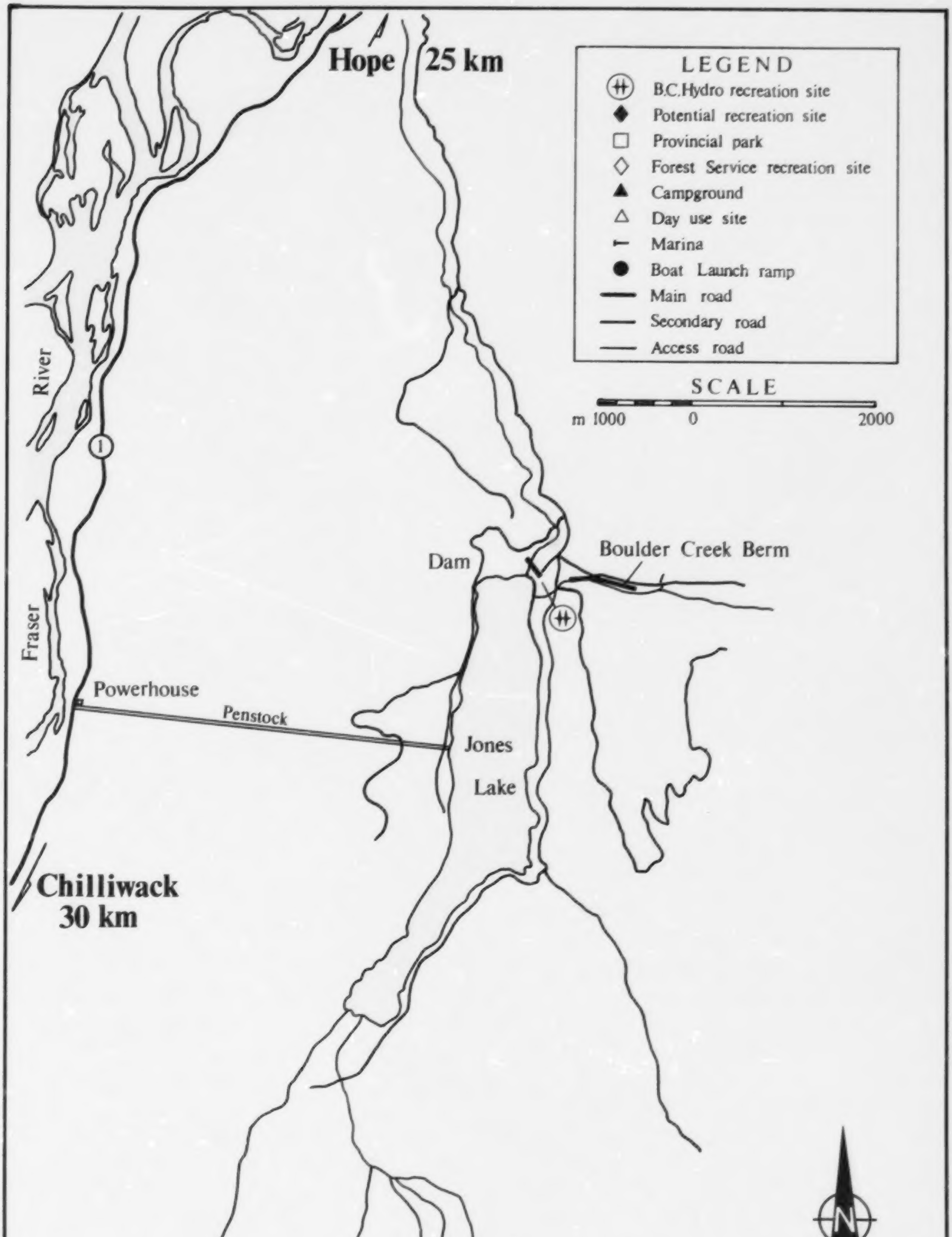
8.0 DEVELOPMENT POTENTIAL

Potential developments at the Hayward Lake site include expansion of beach and picnic area, and increased parking.

9.0 ISSUES

Increasing use at the Hayward Lake site raises the question of optimal site carrying capacity and the direction of future development.

Further development of facilities at this lake must complement other facilities in this region.



(Wahleach)

Jones Lake

JONES (WAHLEACH) LAKE

1.0 LOCATION

Jones Lake is located about 20 km west of Hope in the Skagit Range of the Cascade Mountains.

Access to the lake is provided by a 9 km gravel logging road which begins about 1 km south of the Trans-Canada Highway Jones Lake exit. Heavy snowfalls restrict vehicular access to the lake during the winter months.

2.0 LAND STATUS

Most of the land bordering Jones Lake is Crown-owned. Other than a Crown lease for recreational purposes granted to the Jones Lake Fishing Camp, the remaining private lands fronting on the lake are owned by B. C. Hydro.

In addition to the dam site, B. C. Hydro owns the lands associated with the penstock and powerhouse.

3.0 GENERATING FACILITIES

The hydroelectric facilities at Jones Lake consist of an earth diversion dam on Boulder Creek, an earthfill dam at the north end of the lake and tunnels and penstocks leading to the powerhouse located adjacent to the Trans-Canada Highway and the Fraser River.

Average reservoir drawdown is 20 m.

4.0 RECREATION PERSPECTIVE

Jones Lake's alpine setting provides a scenic backdrop for a variety of back-country recreational pursuits.

The poor condition of the access road and limited boater access to the lake limit recreational use. Snags and debris in the lake also detract from its use.

5.0 RECREATIONAL OPPORTUNITIES

The lake offers primarily boating, fishing and camping opportunities. Hiking, trail bike riding and back-country explorations are also popular in the area.

6.0 RECREATIONAL DEVELOPMENTS

The Jones Lake Fishing Camp operates on the lake despite declining use and its poor state of repair.

B. C. Hydro's public use facilities consist of a lakefront day use area with boater access and parking for about 25 vehicles, and a small campground east of the main dam.

Facilities at the campground include approximately 15 campsites and four pit toilets.

7.0 USE

An estimated 2,250 visitors were at the site between May and September 1987 based on random visual counts.

8.0 DEVELOPMENT POTENTIAL

The following developments are proposed to enhance recreational use in the area:

1. expand the campground and upgrade facilities based on demand,
2. improve waterfront access and boater access to the lake,

Increased development of this area's potential depend upon improvements to the access road.

9.0 ISSUES

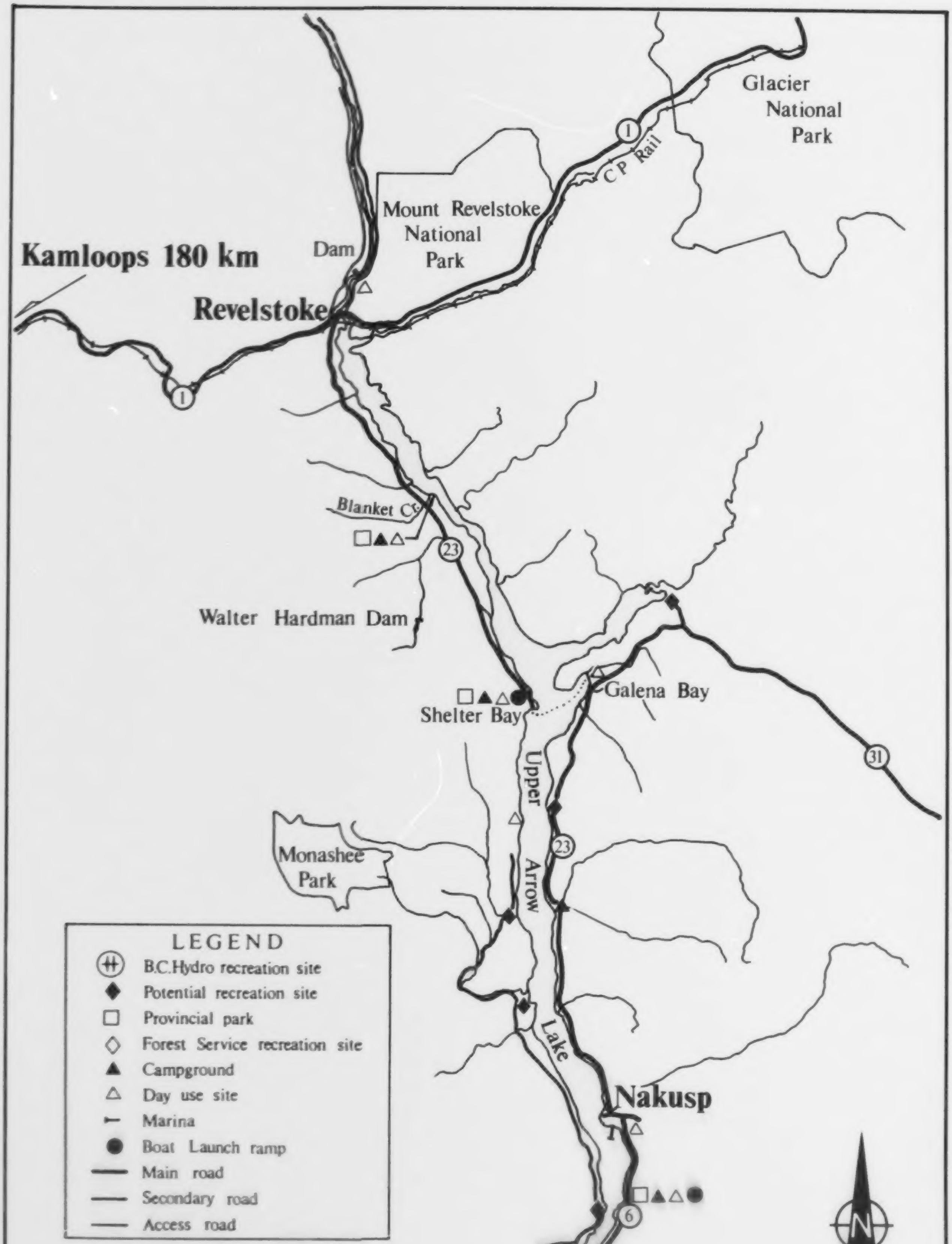
B. C. Hydro does not own or maintain the logging road which provides access to Jones Lake.

Private property at the turnoff to the Jone's Lake access road affects opportunities for road improvements.

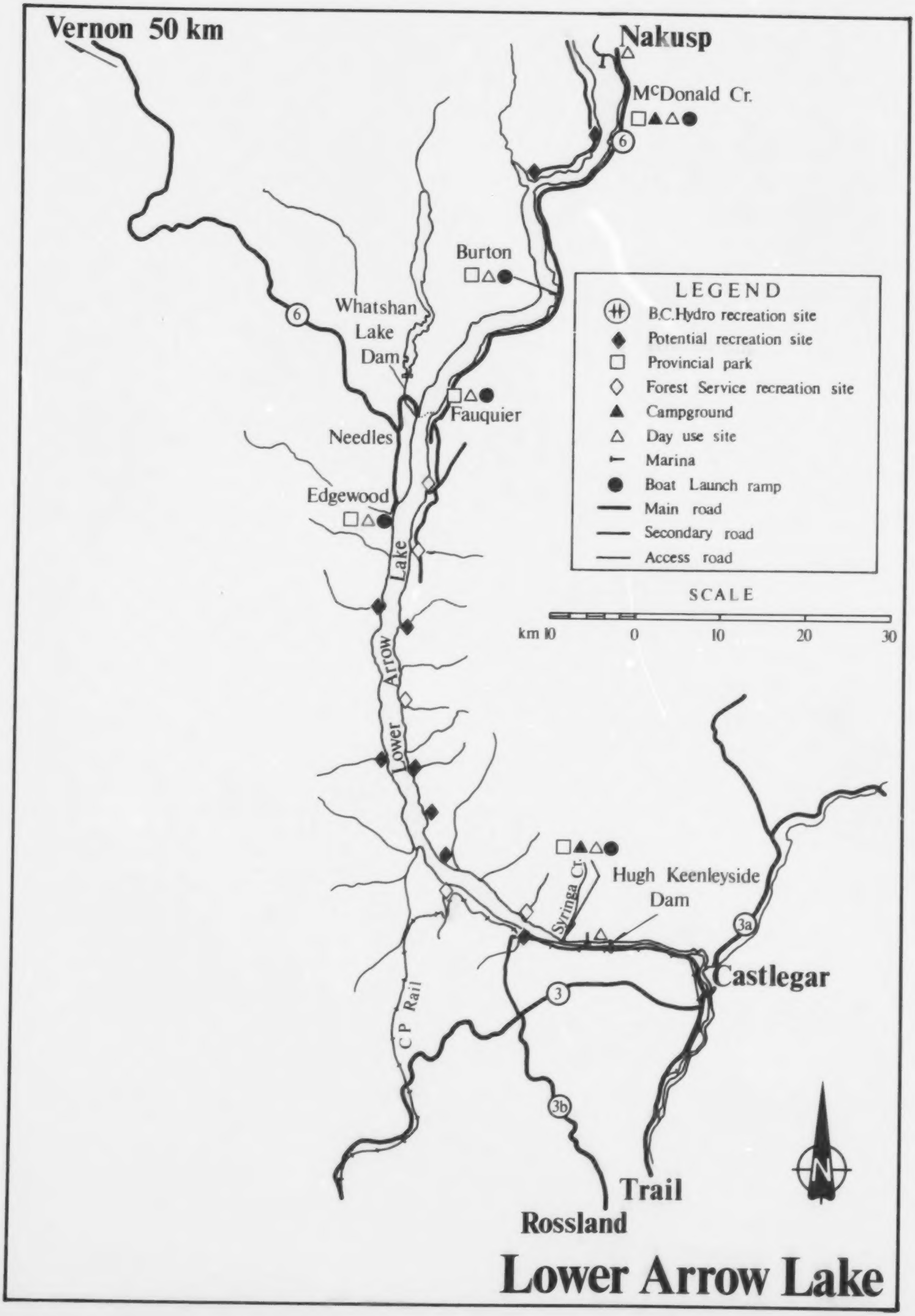
The gravel access road is not recommended for cars with trailers.

More intensive recreational activity on the lake will benefit from clean-up of snags and log debris along the shoreline.

There is a need to manage uncontrolled recreational use on B. C. Hydro property.



Upper Arrow Lake


Vernon 50 km
Nakusp
McDonald Cr.
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Burton
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Whatshan
Lake
Dam
6
□△●
Fauquier
Needles
Edgewood
□△●
Lower Arrow Lake
□▲△●
Syringa Cr.
Hugh Keenleyside
Dam
3a
Castlegar
3
CP Rail
3b
Trail
Rossland
N
LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
km 10
0
10
20
30
Lower Arrow Lake

ARROW LAKE

1.0 LOCATION

The Arrow Reservoir lies in a north-south orientation in the valley separating the Monashee and Selkirk ranges in the West Kootenay region of the province. The 290 km reservoir impounds the Columbia River behind the Hugh Keenleyside Dam. The dam is accessible by road 8 km west of Castlegar. Highway 6 bisects the area and joins Nakusp, Vernon and New Denver. At the north end of the reservoir Highway 23 links Nakusp with Revelstoke and the Trans Canada Highway.

2.0 LAND STATUS

During development of the High Arrow project B. C. Hydro undertook a major land acquisition program. Since that time much of this land has been either returned to former land owners or transferred to the Crown. However B. C. Hydro still retains a number of parcels bordering the Arrow Reservoir.

3.0 GENERATION FACILITIES

As a term of the 1964 Columbia River Treaty, the Arrow Reservoir is required to store 7.1 million acre-feet of water.

The Keenleyside Dam itself consists of a 370 m long concrete discharge work, a 90 m navigation lock, and a 500 m long earth dam. The navigation lock assists log transport to the downstream Celgar pulp mill and recreation boat traffic.

Although the dam incorporates no power generation facilities at this time, its potential for low-head generation is currently being explored.

4.0 RECREATION PERSPECTIVE

Arrow is a long, scenic, easily accessible lake with a variety of interesting natural and heritage features. Good stocks of hatchery reared sports fish are the basis for a significant increase in fishing and related recreational activities.

The high recreational potential of Arrow Lake has been identified by local communities, provincial agencies and the private sector, and plans to develop this potential are being pursued at various levels. Several communities in this area have focussed their economic development efforts on the recreational potential of this lake.

Recreational use, by both area residents and tourists, is increasing and could be enhanced substantially by the provision of additional water-based facilities.

The extensive drawdown associated with the reservoir, and the lack of road access in some areas, are impediments to recreational use.

5.0 RECREATIONAL OPPORTUNITIES

The Arrow Reservoir and area provide opportunities for boating, fishing, water skiing, camping, picnicking, hiking, house boating, heritage interest, boat touring, hot spring bathing and viewing. The reservoir is a 370 km section of a 500 km long navigable waterway stretching from the Grand Coulee Dam in the U.S.A. to Revelstoke.

6.0 RECREATIONAL DEVELOPMENTS

The Arrow Reservoir and area has been extensively developed for recreation. There are three major provincial parks located at Syringa Creek, MacDonald Creek and at Blanket Creek. Minor provincial parks offering boat launching, beach and picnicking facilities are located at Edgewood, Fauquier, Burton and at Shelter Bay.

Forest Service recreation sites with informal camping, picnic and beach areas are located at Galena Bay and Fosthall Point.

A small day use beach located on B. C. Hydro property near the Keenleyside Dam has been upgraded through a local works program. In addition, there are community facilities associated with the small communities throughout the reservoir.

Three marinas are located in the Syringa Creek area and one developed by B. C. Hydro is located at Nakusp. The lock at the Keenleyside Dam provides access for pleasure boats between Arrow Lake and downstream sections of the Columbia River.

There are private summer cottages at various locations along the reservoir.

7.0 USE

Arrow Lake receives moderately heavy increasing recreational use. Fishing and camping on Upper Arrow warrant the provision of additional boater access and camping facilities between Revelstoke and Galena Bay.

B. C. Parks recorded the following attendance at five facilities on Arrow Lake for 1986.

Day Use	51,361 party days	or 180,000 user-days
Camping	6,508 party nights	or 21,000 user-nights

B. C. Parks considers that demand for facilities substantially exceeds supply, particularly on Upper Arrow Lake.

8.0 DEVELOPMENT POTENTIAL

B. C. Parks considers Arrow Lake to have high recreational potential related to fishing. The area is becoming more popular due to improved road access to the region. B. C. Parks is developing a new system plan for Arrow Lake (a Marine Park system) which will address the increasing use and potential of this reservoir.

The B. C. Forest Service recognizes the potential use which can result from the planned enhancement of fish stocks, and has identified 20 potential development sites for a variety of water-based activities. These sites include existing recreation reserves, Crown land, private holdings and B. C. Hydro properties.

Development of sites for boater access for camping, picnicking and shelter is a priority. Opportunities for hot spring bathing, beach development, overnight anchorage, docks, boat ramps and house-boat moorage have also been identified.

The Castlegar-Nakusp Community Futures Program (economic development program) is hoping to support private sector initiatives in reservoir related tourist facilities.

9.0 ISSUES

Additional facilities, including new recreation sites, are required to accommodate increasing recreational use on Arrow Lake.

A series of boater access camping, picnicking, and shelter facilities should be established to accommodate and enhance fishing activities.

B. C. Parks does not have funds for necessary upgrading of some provincial parks (esp. MacDonald Creek Park near Nakusp). Parks at Burton and Fauquier are also somewhat poorly maintained.

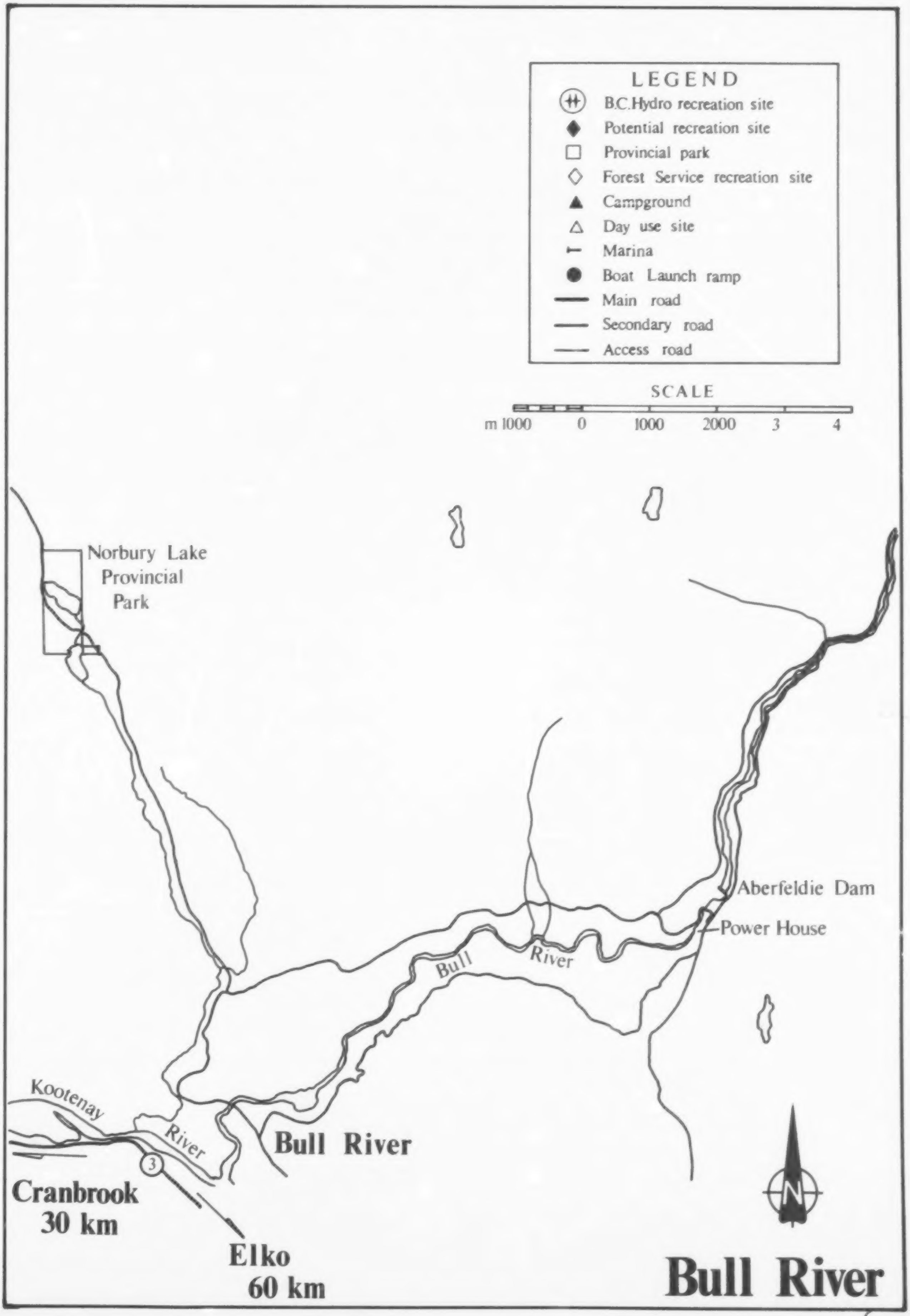
Further development and use of the lake fisheries for tourism will result in an increased pressure on presently stressed populations of rainbow trout and bull trout. To date it appears that these species have suffered the major impacts of the construction of Keenleyside Dam (Ministry of Environment, 1984). Kokanee stocks in the Lower Arrow are presently able to sustain more than the present lowest level, however, they are also important forage species to the larger piscivorous sport fish.

No fishery is able to support unlimited increases in angling effort and Arrow Lake in its present condition is more susceptible to overfishing than most natural systems. Any planned increase in the level of effort in the sport fishery should be reflected in the level of effort to effectively manage the fish stocks. Funds have recently been made available to the Ministry of Environment and Parks for improvements in the production of fish from the Hill Creek spawning channel and hatchery in Upper Arrow Lake and also to develop and implement a fisheries management plan for the Lower Arrow Lake. The potential harvest level from Arrow Lake will likely be dependent on the level of success of these programs.

Seasonal drawdowns of approximately 70' (20 m) impose limitations on recreational enjoyment and use as well as on the cost of developing and operating water based recreational facilities. During low water years, when the reservoir does not fill to at least El 1420' (433 m) for the peak use months of May - September the impact is severe.

There are many interests involved in the recreational potential of Arrow Lake, resulting in a strong need for a coordinated approach to recreational development planning. Community consultation is required in selecting new sites for development.

Development and promotion of Arrow Lake as a tourist destination are hindered by the lack of interpretative and promotional material on the area's natural and heritage features.


LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
m 1000
0
1000
2000
3
4
Norbury Lake Provincial Park
Aberfeldie Dam
Power House
Bull River
Kootenay River
3
Bull River
Cranbrook 30 km
Elko 60 km
N
Bull River

BULL RIVER HEADPOND

1.0 LOCATION

The Bull River Headpond is a small reservoir in a beautiful Rocky Mountain setting 35 km southeast of Cranbrook and 8 km northeast of the town of Bull River. Access to the headpond is gained from Highway 93 via the Bull River Road through the town of Bull River. Forestry roads branch along both sides of the reservoir from the main road.

2.0 LAND STATUS

B. C. Hydro owns the land around the Aberfeldie Dam and downstream to the power house. Land around the reservoir is Crown-owned, with the west side included in Tree Farm Licence 13.

3.0 GENERATION FACILITIES

The 32 m high concrete Aberfeldie Dam with spillway and intake, impounds the Bull River above the Bull River Falls. A 1 km long tunnel carries the water from the headpond down a canyon to the 5000 kW power house. This run-of-the-river project has little storage capacity and a 1 m average drawdown.

4.0 RECREATION PERSPECTIVE

The Bull River Headpond is located in an attractive area of the Rocky Mountains with substantial populations of a variety of wildlife. Good fish populations exist above and below the dam. However, with the exception of fishing, there is little potential for water-based recreation on the headpond because of its small size, steep banks, and strong current. Good road access suggests a potential for camping and hiking.

5.0 RECREATIONAL OPPORTUNITIES

Good populations of Cutthroat trout, whitefish and Dolly Varden support good fishing both above and below the dam.

6.0 RECREATIONAL DEVELOPMENTS

There are no recreational developments in this area.

7.0 USE

Recreational use of the headpond is currently limited to fishing. Use levels do not warrant provision of recreational facilities on the headpond.

8.0 DEVELOPMENT POTENTIAL

The setting and natural resources of the area present the opportunity to provide hiking, camping and sight-seeing facilities, should demand for them arise.

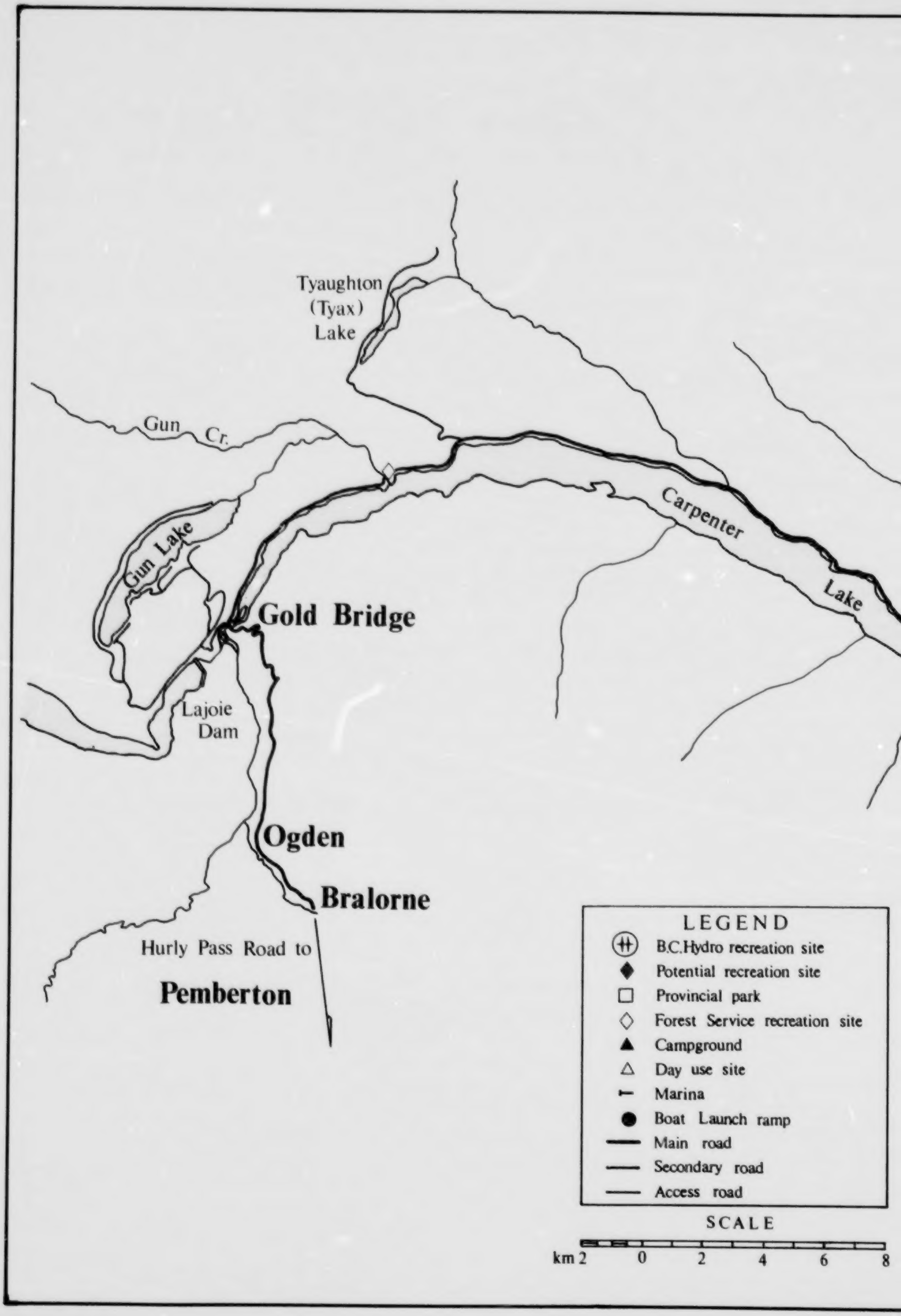
9.0 ISSUES

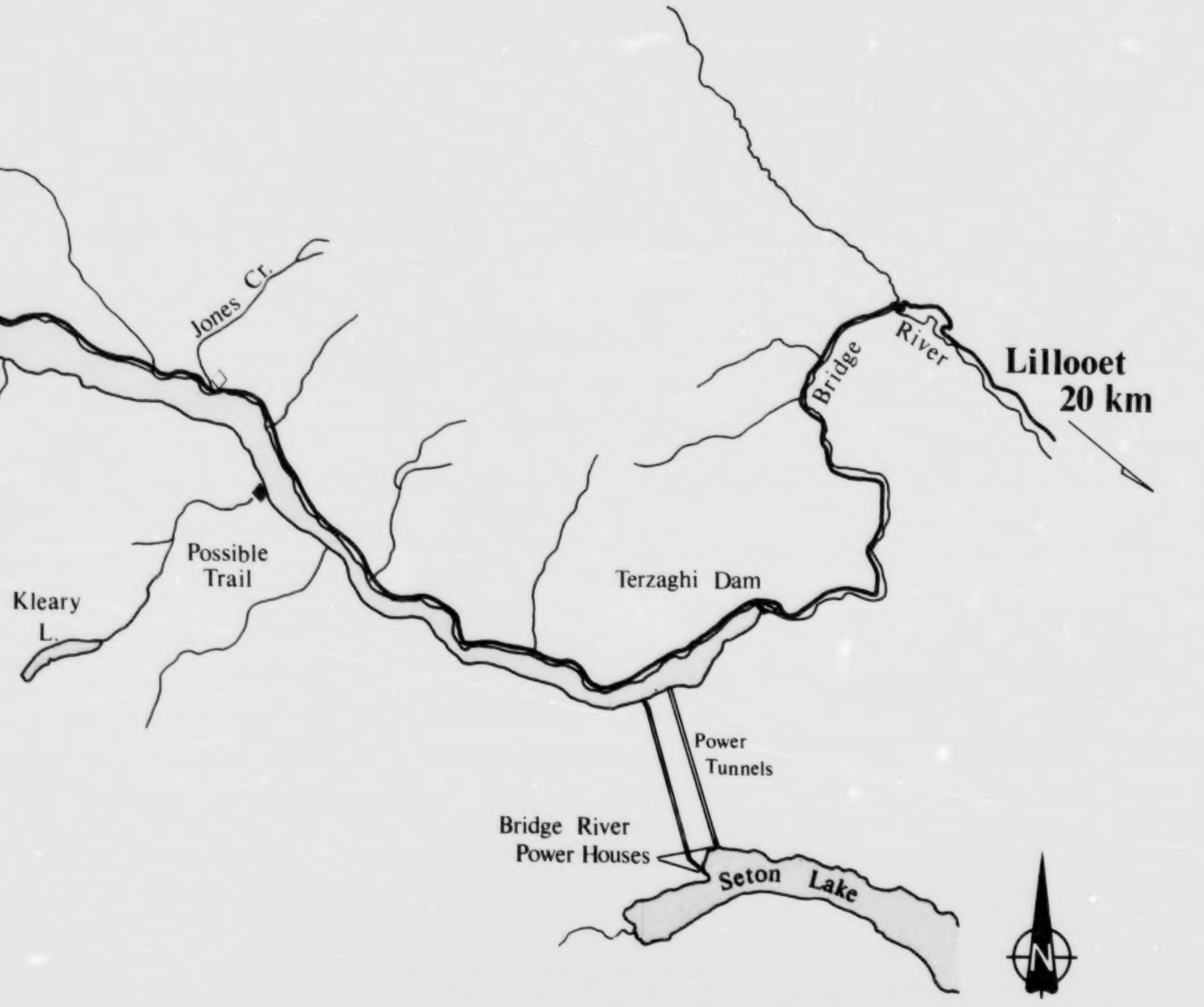
The popularity of fishing in the area may make over-fishing an issue.

Demand for recreational facilities in the area is likely to be the determining factor in the development of the area's potential.

The strong current on the headpond is considered a hazard to water use.

The Forest Service believes this area should be left undeveloped because of the lack of demand for facilities, and the hazard posed by the strong current. It has no plans for any facilities in this area.


Tyaughton
(Tyax)
Lake
Gun Cr.
Gun Lake
Carpenter Lake
Gold Bridge
Lajoie Dam
Ogden
Bralorne
Hurly Pass Road to
Pemberton
LEGEND
⊕ B.C.Hydro recreation site
◆ Potential recreation site
☐ Provincial park
◇ Forest Service recreation site
▲ Campground
△ Day use site
Marina
● Boat Launch ramp
Main road
Secondary road
Access road
SCALE
km 2 0 2 4 6 8



Carpenter Lake

CARPENTER LAKE

1.0 LOCATION

Carpenter Lake is a long, narrow lake lying in the Bridge River valley in the Coast Mountains. The eastern tip of the reservoir at Terzaghi Dam is about 45 km northwest of Lillooet. Downton Lake is immediately upstream while Seton Lake is 4 km to the south.

Main access is provided by a two-lane secondary gravel road from Lillooet that skirts the northern shoreline and continues to Gold Bridge, Bralorne and Gun Lake. A branch road at Gold Bridge provides limited access to the southwest shore. From the Terzaghi Dam a limited access road follows the southeast shore before turning south to Shalalth.

2.0 LAND STATUS

B. C. Hydro owns a number of lots scattered around the reservoir totalling over 300 ha, some of which afford good access to the reservoir. The remaining perimeter land is Crown-owned.

There is a heavy concentration of mineral claims at the western end of the reservoir, and timber licences border a portion of the north shore on the western part of the lake.

3.0 GENERATION FACILITIES

Carpenter Lake Reservoir was created by the 55 m high Terzaghi Dam on the Bridge River. Water is diverted through two 4 km long tunnels to two power houses on Seton Lake, producing 428,000 kW.

A drawdown of 44.5 m occurs on this reservoir.

4.0 RECREATION PERSPECTIVE

Carpenter Lake has a scenic setting in an area of substantial and increasing recreational travel and use. Availability of access to the water, and further cleanup of the lake may encourage enhanced recreational development and use.

Access to the region via Pemberton has improved, and B. C. Parks is planning to assess the park potential of Carpenter Lake in order to meet increased demand and to take advantage of the area's significant recreational and historic features. The Goldbridge/Bralorne area is considered important for its mining history.

5.0 RECREATIONAL OPPORTUNITIES

Picnicking, camping, boating, fishing and hunting are activities available at this lake.

6.0 RECREATIONAL DEVELOPMENT

The Forest Service provides a boat launch near Terzaghi Dam, and recreation sites (5 to 6 tables each) with boat ramps at Gun Creek and Jones Creek. An undeveloped area below Terzaghi Dam is used for camping.

7.0 USE

Current recreational use of the reservoir is light, with fishing being the primary activity. There is also the occasional hunter or hiker.

8.0 DEVELOPMENT POTENTIAL

The mining history of the Goldbridge/Bralorne area has heritage significance, and recreational demand in this area is increasing due to improved access from Vancouver via Hurly Pass and the Duffy Lake Road. Consequently, B. C. Parks plans to assess the potential of Carpenter Lake to meet the needs for a park in this area.

The Forest Service has no facilities on the south shore and may upgrade an old trail to Keary Lake, with a boat access recreation site at the mouth of Keary Creek.

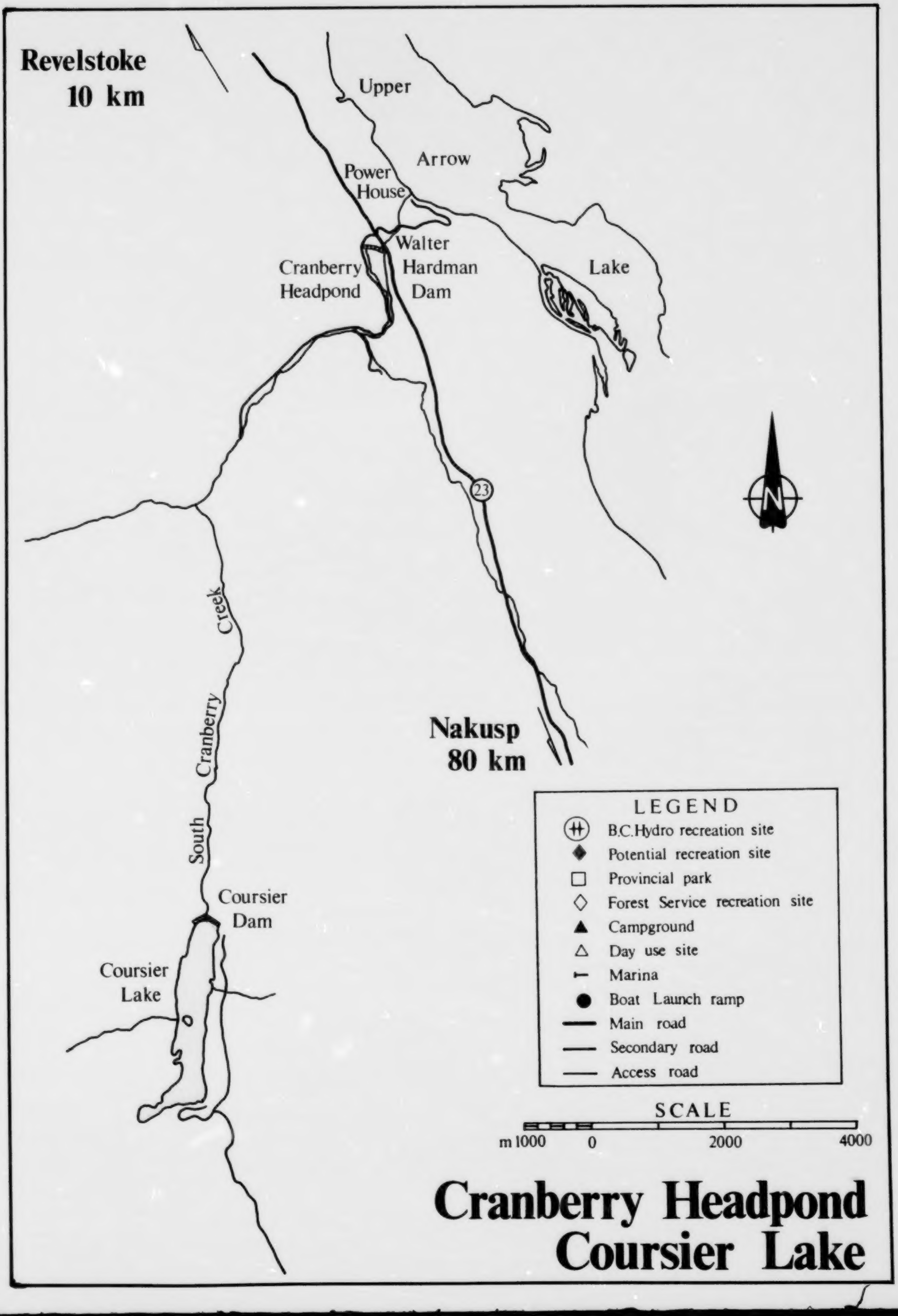
Some sites along the lake may be suitable for beach development, if the debris is cleared.

9.0 ISSUES

Debris detracts from the appearance and use of this lake and access to the water is limited.

Increased recreational demand in this area will affect the degree of development on this lake.

Recreational development by B. C. Hydro will be significantly affected if B. C. Parks determine that this lake serves as a desirable site for a Provincial Park.



Cranberry Headpond
Coursier Lake

COURSIER LAKE

1.0 LOCATION

Coursier Lake lies in the Monashee Mountains 40 km southwest of Revelstoke on the west side of the Columbia River Valley. Access along the east shore of the lake is gained by a 12 km steep and winding forestry road originating at Highway 23.

2.0 LAND STATUS

The land at and around the project is Crown-owned and is included in Tree Farm Licence 23. B. C. Hydro retains the right to maintain and operate its facilities under the terms of the water licence.

3.0 GENERATION FACILITIES

The 18 m high earthfill dam and reservoir provide water to the downstream Cranberry Headpond and power house on Upper Arrow Lake. The yearly drawdown is 21 m with the minimum level usually occurring in April and the maximum in August.

4.0 RECREATION PERSPECTIVE

This is a small reservoir in a high scenic mountain setting. The lake has no natural beaches, difficult access to the water, substantial debris accumulation, and a tree-stump lined shore. The upper level creeks contain a healthy population of Rainbow trout which are popular with local fishermen. The lake itself is little used for recreation.

5.0 RECREATIONAL OPPORTUNITIES

The lake area supports some fishing, hunting, hiking and camping.

6.0 RECREATIONAL DEVELOPMENTS

There are no recreational developments in this area.

7.0 USE

The lake experiences little recreational use, with fishing and camping the main activities.

8.0 DEVELOPMENT POTENTIAL

Due to the limitations of shoreline access, debris, and road access, this area has little potential for recreational development. However, the Forest Service considers that an overnight recreation site would be an ideal facility for the area. It would also like to see information signs for this area.

9.0 ISSUES

Severe limitations to recreational potential practically preclude development in this area. If a recreation site were established at this lake, access road improvements would be required.

CRANBERRY HEADPOND

1.0 LOCATION

Cranberry Headpond is a small reservoir located near Highway 23 about 25 km south of Revelstoke on the west side of Upper Arrow Lake. Access is gained via Highway 23 from Revelstoke and a main forestry road which branches off near the damsite and follows the western side of the headpond.

2.0 LAND STATUS

The land at and around the project is Crown-owned and is included in Tree Farm Licence 23. B. C. Hydro retains the right to maintain and operate the generation facilities under the terms of its water licence.

3.0 GENERATION FACILITIES

The Walter Hardman Dam is an earthfill structure impounding Cranberry Creek. A single penstock carries the water to an 8 MW power house on Upper Arrow Lake.

Headpond drawdown is limited to 2.5 m over any 3-day period. Water level at the headpond is regulated at Coursier Lake about 10 km upstream.

4.0 RECREATION PERSPECTIVE

The small size, cold water and muddy shoreline are major limitations to recreational use. However, the site is scenic and the headpond contains some fish which are popular with local fishermen.

5.0 RECREATIONAL OPPORTUNITIES

The headpond area provides opportunities for fishing, hiking and sight-seeing.

6.0 RECREATIONAL DEVELOPMENTS

There are no recreational developments in the headpond area.

7.0 USE

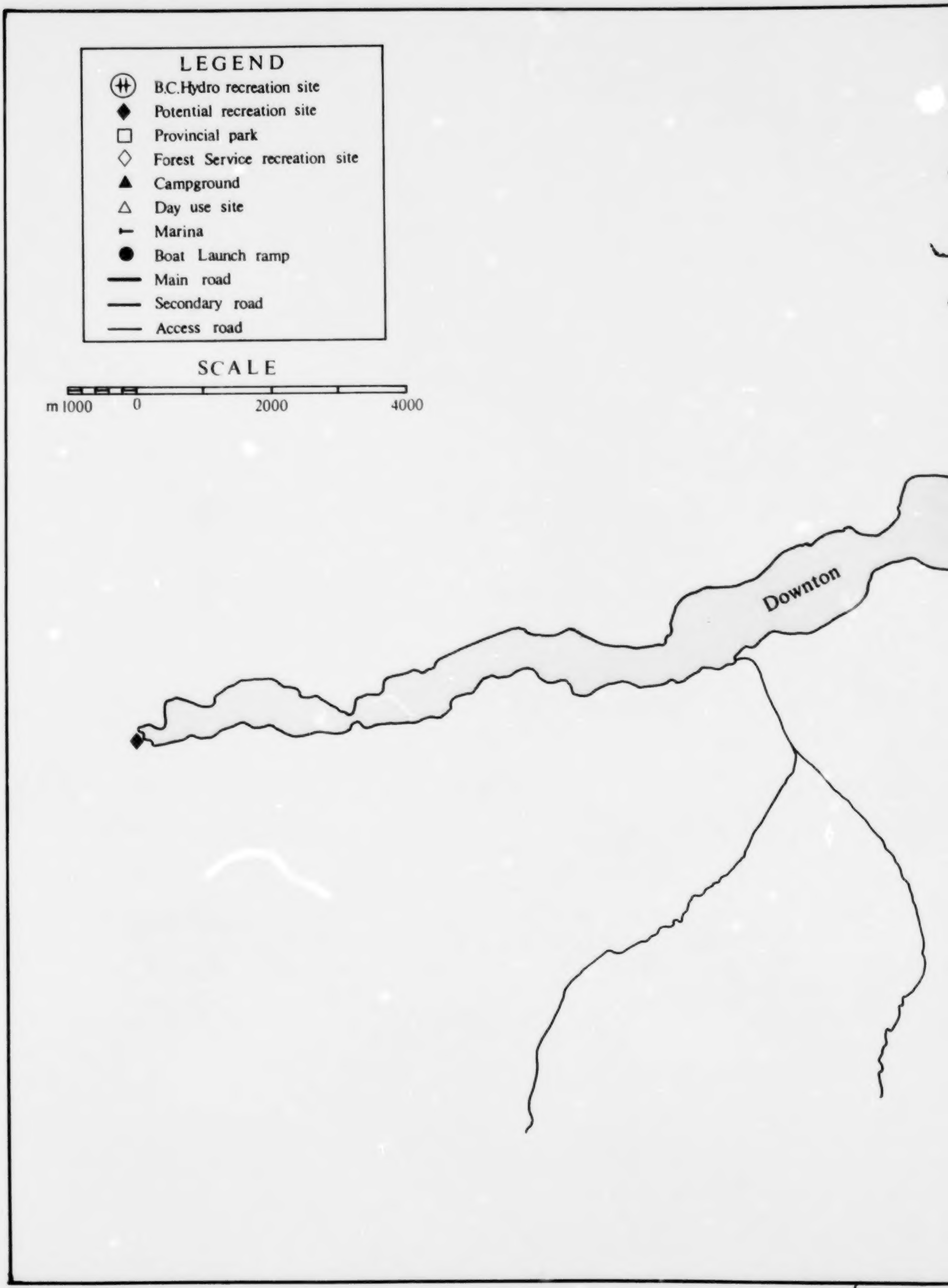
Little recreational use occurs in this area.

8.0 DEVELOPMENT POTENTIAL

This area has very limited potential for recreational development, but a day use area for anglers and picnickers may be appropriate. The Walter Hardman Generating Plant on Arrow Lake may have potential as a tourist attraction, and the site could possibly provide access to the lake.

9.0 ISSUES

Ecological protection of this area is an issue with some members of the Revelstoke community.


LEGEND
B.C.Hydro recreation site
◆ Potential recreation site
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Marina
● Boat Launch ramp
Main road
Secondary road
Access road
SCALE
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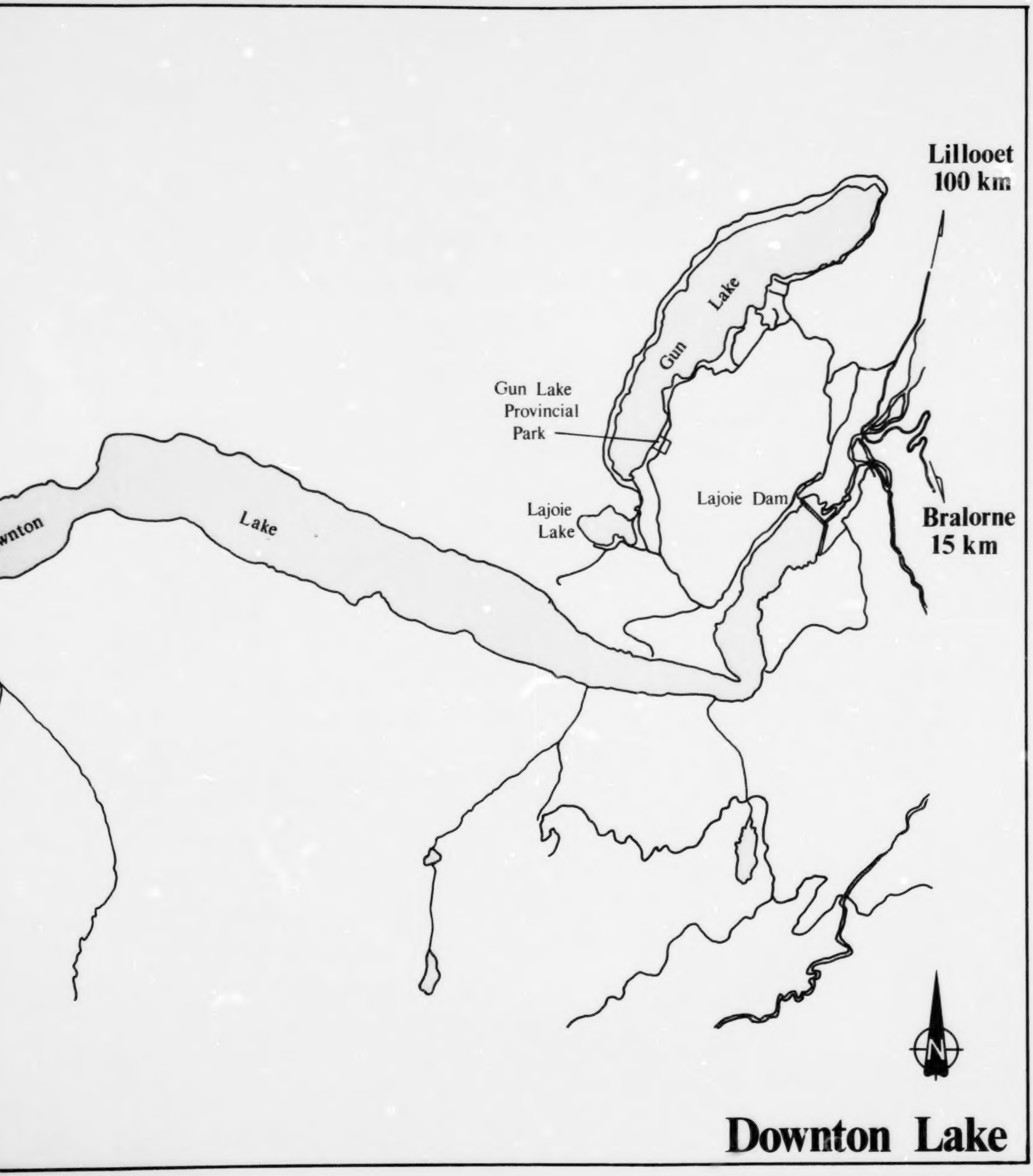
Downton



Downton Lake

DOWNTON LAKE

1.0 LOCATION

Downton Lake, located about 100 km west of Lillooet and about 15 km west of Bralorne, lies in the Bridge River valley immediately upstream of Carpenter Lake. Nearby peaks of the Coast Mountains rise about 1200 m above the lake.

Access to the reservoir is off the main road connecting Bralorne with Lillooet. A branch road passes Lajoie Dam before turning north to Gun Lake. No road access is available beyond the eastern end of the reservoir.

2.0 LAND STATUS

B. C. Hydro owns land immediately surrounding Lajoie Dam but the remaining land around the lake is Crown-owned.

There is a timber licence along the northeast shore and a B. C. Hydro mineral reserve at the southeast end of the lake.

3.0 GENERATION FACILITIES

The Lajoie Dam is a rockfill structure 87.5 m high with a crest length of 1033 m. The remote controlled power house has one turbine generating 22,000 kW.

The reservoir is used primarily to supply water to the Carpenter Lake and Bridge power houses. Forty-nine metre drawdowns occur on this reservoir.

4.0 RECREATION PERSPECTIVE

Downton Lake has a scenic setting close to the popular Gun Lake recreation area and has good fishing. However, further consideration for recreational development is limited by heavy debris accumulation, a severe (49 m) drawdown exposing unsightly snags for most of the summer, strong winds and lack of access.

5.0 RECREATIONAL OPPORTUNITIES

The most likely recreational opportunity on the lake is fishing but this possibility is severely limited by lack of access, debris, and strong winds. The lake also provides access to hunting grounds.

6.0 RECREATIONAL DEVELOPMENTS

There are no recreational facilities on Downton Lake.

7.0 USE

The lake is used mainly for hunting access, and also accommodates the occasional fisherman or hiker.

8.0 DEVELOPMENT POTENTIAL

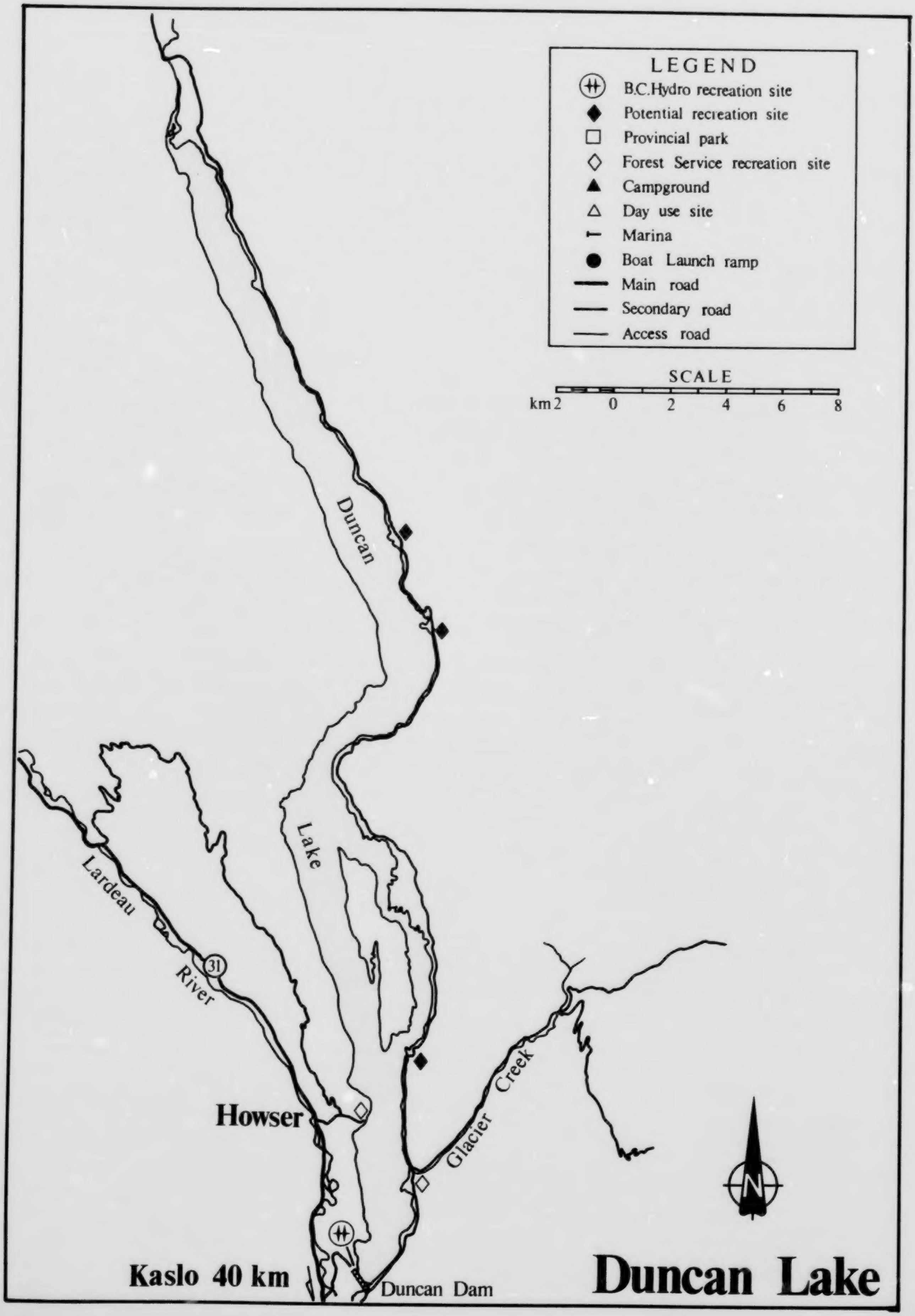
The severe drawdown and strong winds severely limit recreational potential. Fishing would be encouraged by the removal of debris at the east end of the lake.

A new road along the south shore of the lake is being considered, and this would improve access, particularly for fishing. A Forest Service recreation site may be provided at the west end of the lake.

9.0 ISSUES

Removal of snags and floating debris would be required to encourage additional fishing.

Further use of this lake for fishing would depend upon extended road access and boat launch facilities.


LEGEND
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SCALE
km 2 0 2 4 6 8
Duncan
Lake
Lardeau
River
31
Howser
Glacier
Creek
N
Kaslo 40 km
Duncan Dam
Duncan Lake

DUNCAN LAKE

1.0 LOCATION

Duncan Lake lies between the Selkirk and Purcell mountain ranges about 40 km north of Kaslo. Water from the reservoir flows into Kootenay Lake. Access to the dam is gained from Highway 31. A forestry road skirts the entire eastern bank of the lake. Branch forestry roads provide access to the southwest shore from Highway 31 at Howser. The west side of the lake is largely inaccessible by road.

2.0 LAND STATUS

B. C. Hydro owns the damsite and several other parcels on the reservoir totalling about 200 ha. Some of this land is in the community of Meadow Creek near the damsite. Most of the land owned around the reservoir is Crown-owned.

Kootenay Forest Products owns a large parcel on the Duncan River above the lake and several parcels along the east side forestry road. There are several private parcels on and near the reservoir at the community of Howser. A recreational subdivision exists at Besecker Bay on the island. Several mineral claims border the reservoir.

3.0 GENERATION FACILITIES

Facilities are limited to the 40 m high earthfill Duncan Dam and spillway. The project provides water regulation for downstream plants in the United States under the Columbia River Treaty. Average yearly drawdown is about 30 m. Full pool level is usually attained in mid July and drawdown may begin as early as August resulting in a "natural" lake appearance for only 6 to 8 weeks in the summer. There is no debris problem, since timber was cleared from the drawdown area.

4.0 RECREATION PERSPECTIVE

This reservoir lies in a scenic valley which is experiencing increased recreational use, primarily by local residents. The area supports a good variety of ungulates and large fur bearers and fish numbers in the lake are moderate.

5.0 RECREATIONAL OPPORTUNITIES

The reservoir provides opportunities for boating, picnicking, camping, sight-seeing and cottages.

6.0 RECREATIONAL DEVELOPMENTS

The Forest Service maintains two recreational sites on Duncan Lake.

The Howser day use area provides:

3 pit toilets
12 picnic tables
changehouse
boat launch

The Glacier Creek campsite provides:

9 campsites with tables
2 pit toilets
boat launch
small beach area

B. C. Hydro maintains a viewpoint at the damsite.

7.0 USE

The Howser day use site receives moderate use during summer and fall.

The Glacier Creek campground also receives moderate use during summer and fall (1000 - 1500 user days per year).

Increasing local use at the south end of the lake may warrant expansion of existing facilities and/or development of new sites.

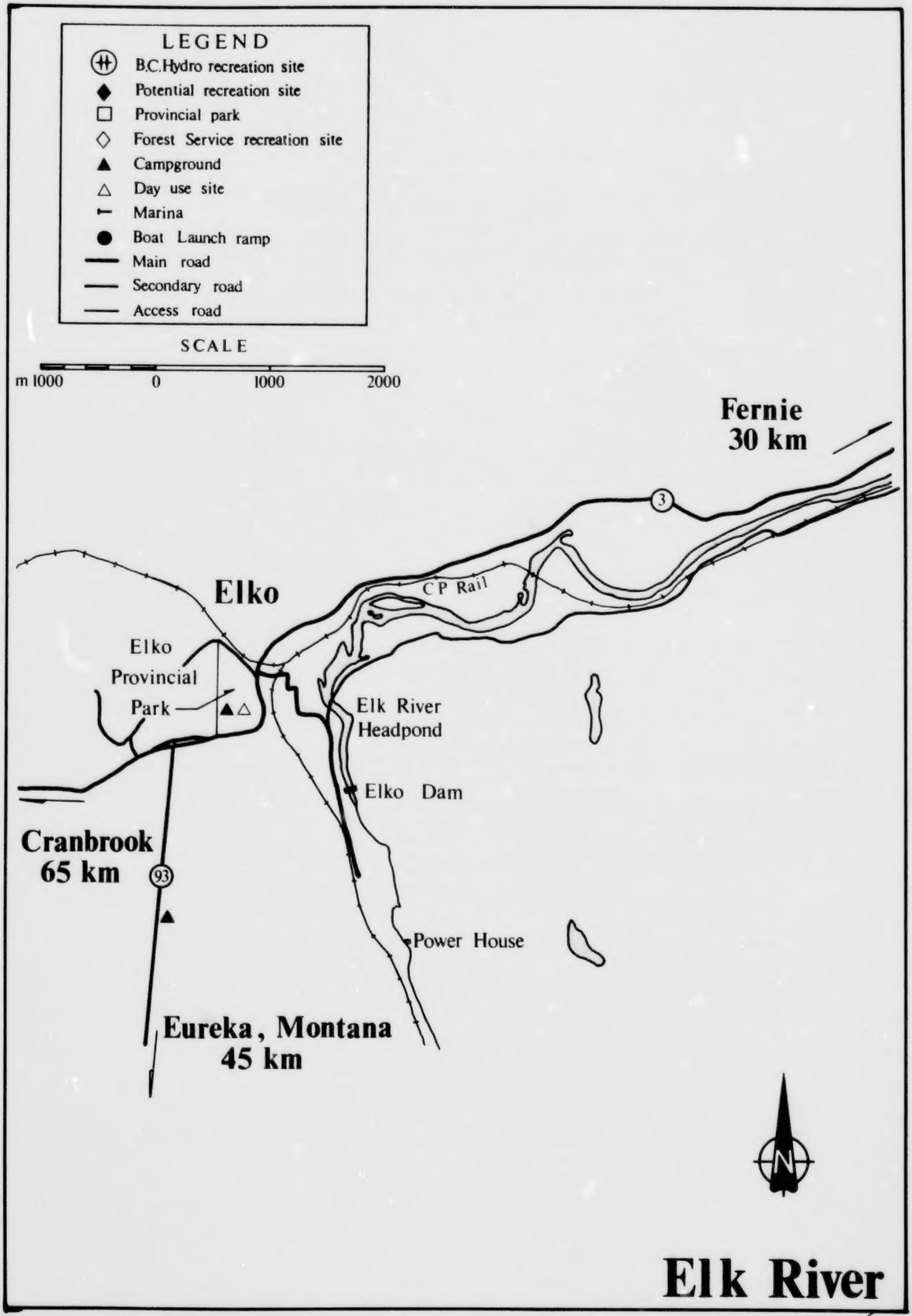
8.0 DEVELOPMENT POTENTIAL

The Glacier Creek site has potential for development as a Forest Service destination site for lake use and base camp for excursions into the surrounding back-country. Future expansion of this site would entail more campsites, larger day-use area and more toilets.

The Forest Service has identified three additional sites which have development potential for lakeside camping. Possible future development will depend largely upon use pressures. Several UREP reserves have also been designated on this reservoir.

9.0 ISSUES

The locally popular Glacier Creek Forest Service recreation site on the east side of the lake has been suggested as a Regional District park by area residents. However, the site is considered too remote for day use, and survey costs to establish a Regional District park, would be high.


LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
m 1000
0
1000
2000
Fernie
30 km
3
CP Rail
Elko
Elko
Provincial
Park
Elk River
Headpond
Elko Dam
Cranbrook
65 km
93
Power House
Eureka, Montana
45 km
N
Elk River

ELK RIVER HEADPOND

1.0 LOCATION

The Elk River Headpond is located near the community of Elko about 70 km southeast of Cranbrook. A main road connects Highway 3 at Elko with the headpond and dam. A branch road provides access to the east side of the headpond. Since Highway 93 joins Highway 3 at Elko, there is good access to the project from three locations (Fernie, Cranbrook and Eureka, Montana).

2.0 LAND STATUS

B. C. Hydro owns the land between the dam and the power house as well as a large lot on the east side of the river. A narrow strip of Hydro land extends into the community of Elko along the west side of the river above the dam. There is also a large block of B. C. Hydro land further upstream on the south side of the river. One of the B. C. Hydro parcels is leased to the Fish and Wildlife Branch for ungulate winter range.

In addition to a variety of private holdings north of the dam in Elko, there are also a private trailer park on Highway 3, and a private campground on Highway 93 a few kilometres south of Elko. Elko Provincial Park (a community playing field) borders the community on Highway 3.

3.0 GENERATION FACILITIES

Facilities include the 15 m high concrete dam, 2 km penstock and 6000 kW capacity power house. This is a run-of-the-river project with little storage capacity and minimal drawdown. Low winter flows limit the period of maximum output to 7 months.

4.0 RECREATION PERSPECTIVE

The small size of the Elk River Headpond practically limits water-based recreation to fishing. However, the area is scenic, easily accessible, and borders one of the continent's most valuable winter ranges for ungulates (called the Serengeti of North America). There is an excellent opportunity to develop interpretative trails and facilities for wildlife viewing.

5.0 RECREATIONAL OPPORTUNITIES

Wildlife viewing (including bird watching) is possible in the area. Fishing occurs above the dam, but fish stocks are limited.

6.0 RECREATIONAL DEVELOPMENTS

There are no recreational facilities on the headpond. Camping facilities are provided at a private campground on Highway 93.

7.0 USE

Recreational activity in the reservoir area is generally low but the amount of fishing on the headpond threatens the available fish stocks.

8.0 DEVELOPMENT POTENTIAL

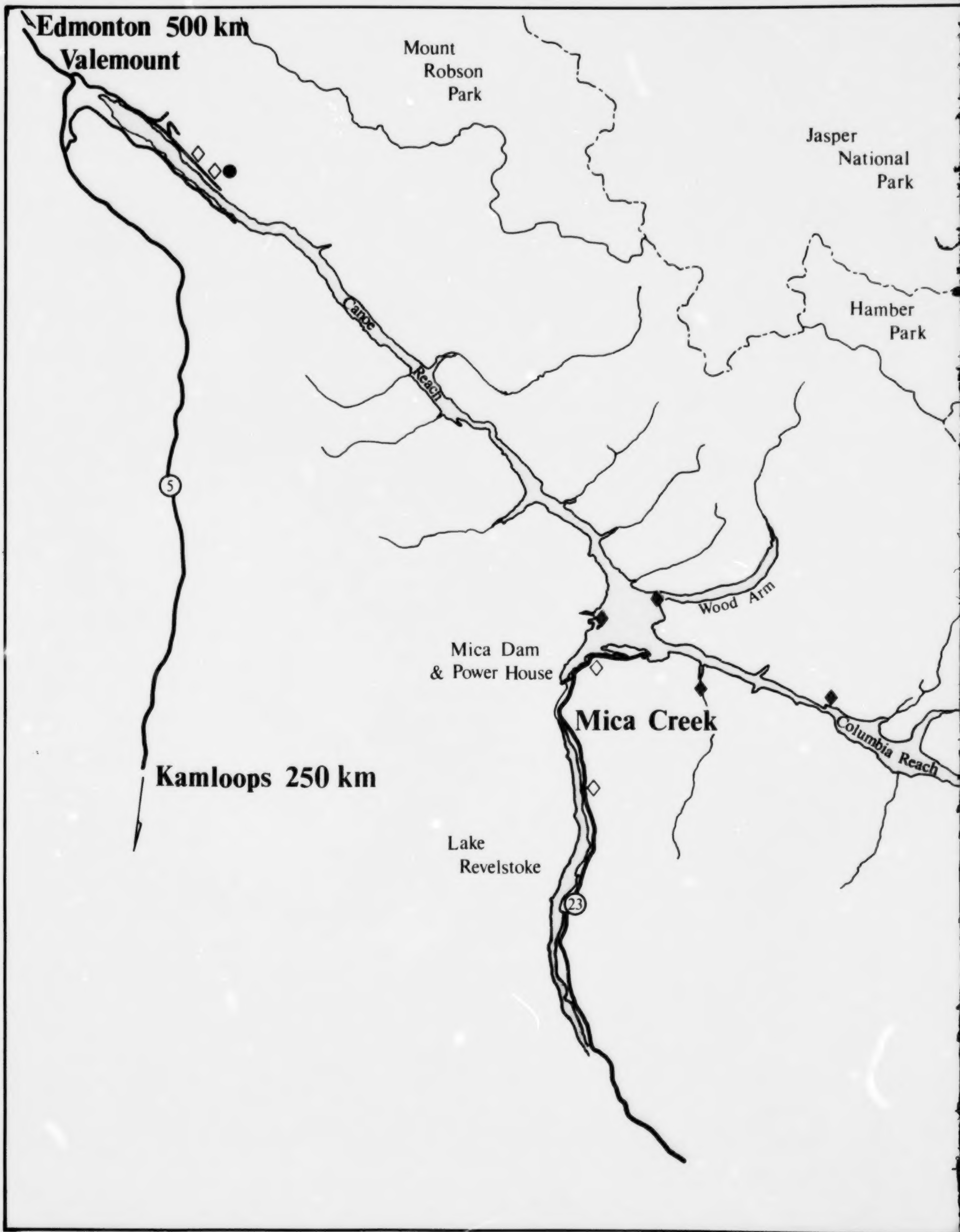
The area's exceptional wildlife habitat provides an excellent opportunity to develop interpretative trails and facilities for wildlife viewing in conjunction with the Ministry of Environment. Elements of electric power generation could also be included in these facilities.

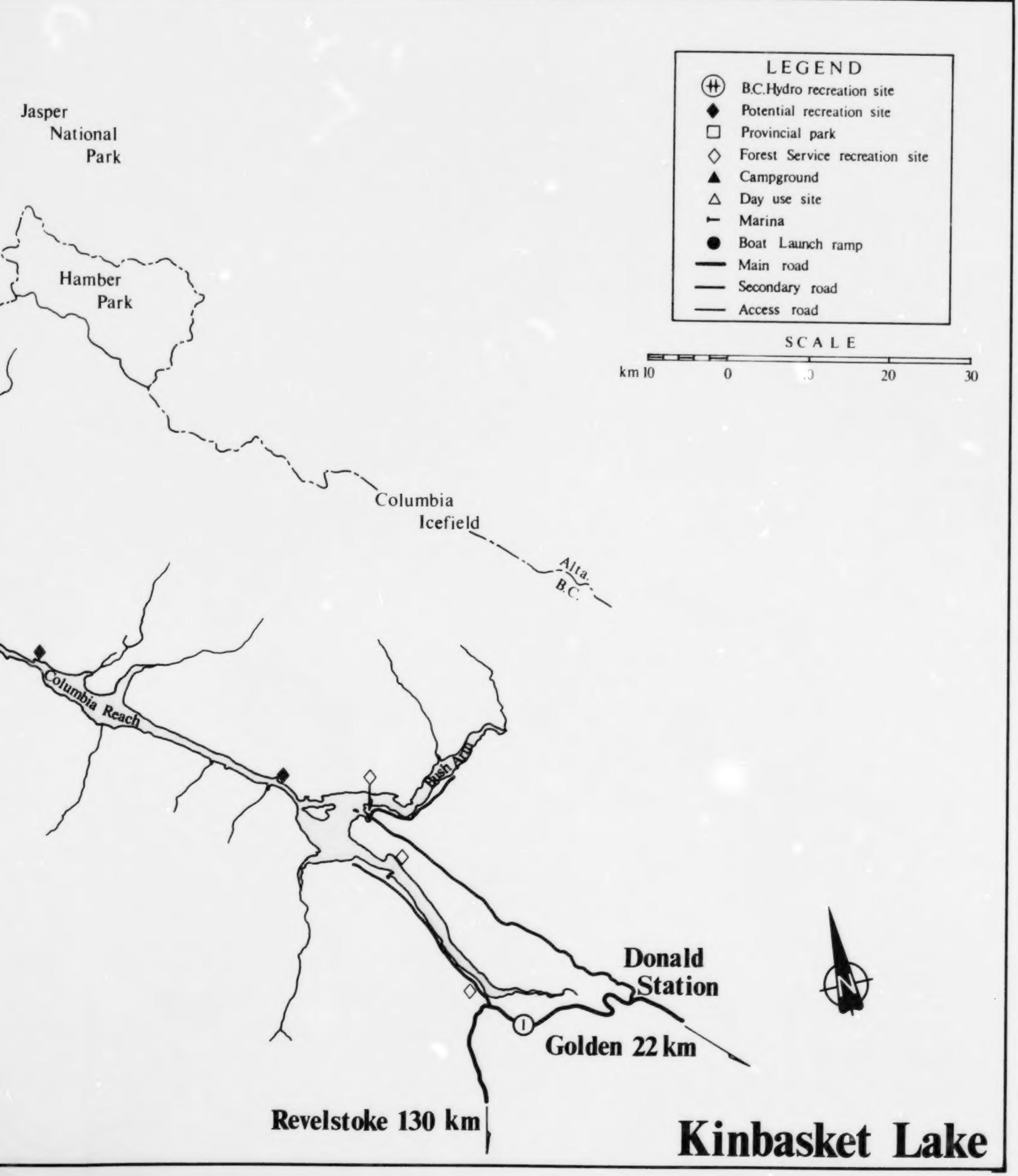
The existing nearby campground and ease of access from well-travelled tourist routes suggest the possibility of high visitor use of these facilities.

9.0 ISSUES

Over-fishing on the headpond is a current concern, and the Fish and Wildlife Branch is considering imposing a catch-and-release regulation. Additional visitors to the area could increase the concern for available fish stocks.

The impact of any trail and facility development on wildlife habitat and movement would be a concern.


Edmonton 500 km
Valemount
Mount Robson Park
Jasper National Park
Hamber Park
Canoe Reach
5
Wood Arm
Mica Dam & Power House
Mica Creek
Columbia Reach
Kamloops 250 km
Lake Revelstoke
23



Kinbasket Lake

KINBASKET LAKE

1.0 LOCATION

Kinbasket Lake is the extremely large reservoir formed along the Columbia and Canoe river valleys by the construction of the Mica Dam. The reservoir stretches 216 km from Valemont in the north to Donald Station in the south.

Main access points to Kinbasket Lake reservoir are:

1. near Valemont along the Yellowhead Highway 5 which continues eastward to Edmonton;
2. at Mica Dam by Highway 23 from Revelstoke; and
3. near Donald Station along the Trans Canada Highway.

At each of these points forestry roads extend for varying distances along the banks of the reservoir.

2.0 LAND STATUS

The vast majority of lands bordering Kinbasket Lake are Crown, except for small isolated privately-held lots. B. C. Hydro owns lands around the Mica Dam and has some property at the north end of the reservoir near Valemont.

Logging occurs throughout the reservoir area, hence, significant areas of Crown land are held under various forest tenures.

3.0 GENERATION FACILITIES

Mica Dam is 244 m high with a crest length of 793 m. The power house has a present generating capacity of 1736 MW from four generators with potential to install two more generators for an ultimate capacity of 2604 MW.

The average yearly drawdown is 48 m with full pool level usually attained in August.

4.0 RECREATION PERSPECTIVE

Kinbasket Lake extends for a great distance along one of the most scenic wilderness areas in the province. The entire reservoir is surrounded by mountains with the Rocky Mountains to the east and the Monashee and Selkirk ranges on the west. The lack of good access, remote location and extensive accumulations of floating wood debris are significant constraints to intensive recreational use.

While overall recreational activity is light, it is increasing slowly, possibly warranting additional facilities, particularly in a couple of areas which are heavily used.

5.0 RECREATIONAL OPPORTUNITIES

Kinbasket Lake has opportunities for boating, fishing, rustic or wilderness camping, picnicking, hiking, sight-seeing, hunting, nature study, and blueberry picking.

6.0 RECREATIONAL DEVELOPMENTS

The Ministry of Forests has developed rustic campgrounds and boat launches at Beavermouth, Esplanade Bay and Bush Arm in the south. There are some informal boat launch sites along a logging road which extends as far as Double Eddy Creek on the southwest side of the reservoir. A campground and boat launch is located at Potlatch Creek near the Mica Dam. At the north end of the reservoir a campground is provided at Yellow Jacket Creek and a boat launch is located at Horse Creek.

A privately operated campground and marina is located at Beavermouth Creek and a private summer cottage development is located at Esplanade Bay.

7.0 USE

Ministry of Forests staff in McBride estimate 1200 user-days annually on the north end of the reservoir. The boat launch and camping area at Horse Creek near Valemont is heavily used and is occasionally inadequate for both parking and camping. At Esplanade Bay use is estimated at about 500 to 700 user-days. Activity in the south end of the lake is considered by the Forest Service to be light but increasing slowly. The Ministry of Forests site at Potlatch Creek received 681 user-days in 1987 and is considered heavily used. A moderate degree of boating activity occurs at Wood Arm.

8.0 DEVELOPMENT POTENTIAL

The large size of this lake, together with its exceptional wilderness scenic qualities, good fishing, and proximity to two major tourist travel corridors indicate strong potential for further recreational development and use. The extension of logging roads along the reservoir will provide access to new parts of the lake. The possibility of a new logging road down the west side of the lake from Valemont to Mica suggests the development of a major tourist corridor. The Forest Service at Golden has identified four potential recreation sites from the Mica Dam area south, and has made map notations of three other areas. B. C. Parks plans to take over operation of the Potlatch Creek campground from the Forest Service, and intends to upgrade the facility. The Village of Valemont is promoting tourist use on its end of the lake, and tourist interest and use at the Golden end is increasing slowly.

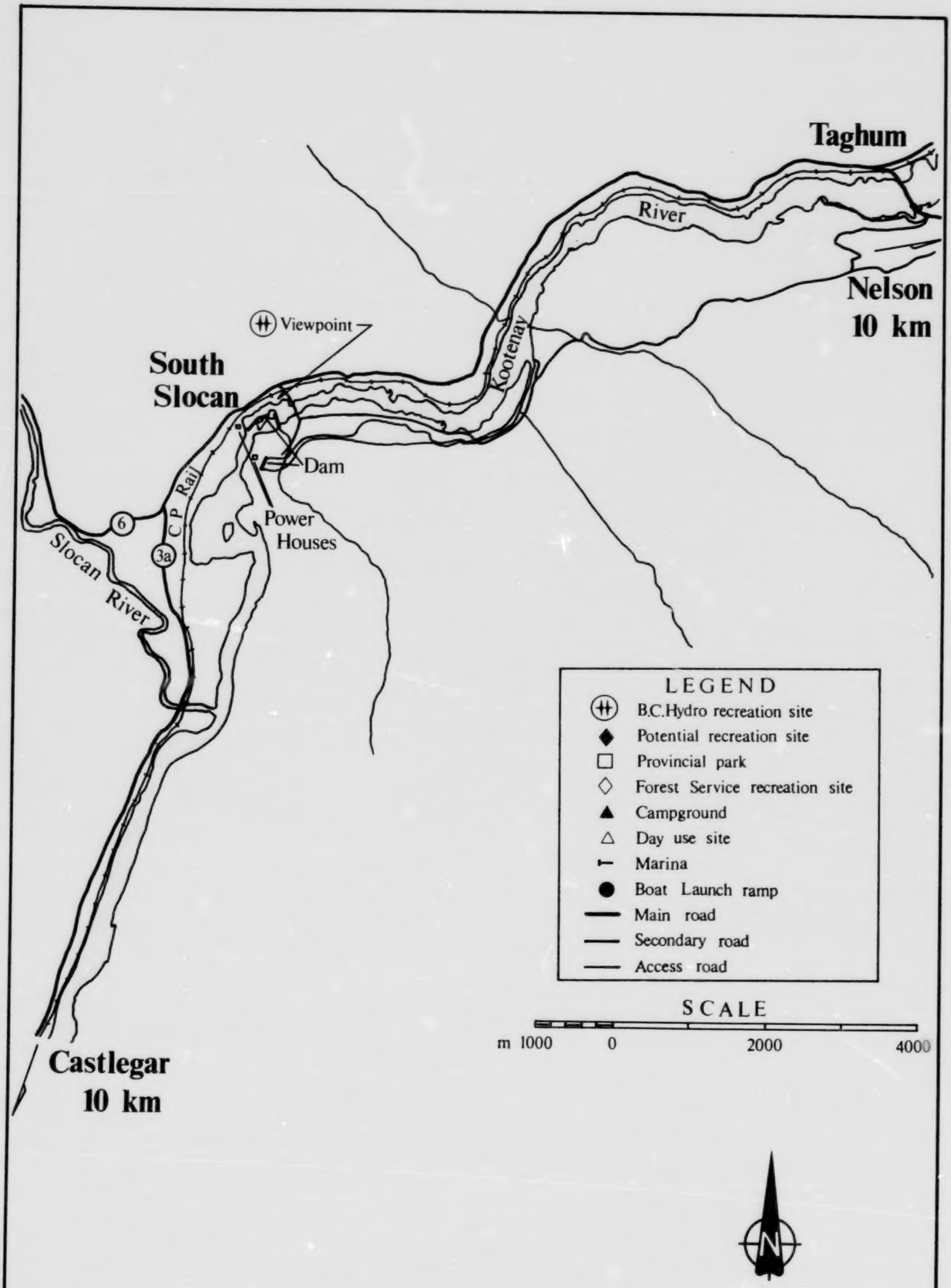
9.0 ISSUES

Large amounts of floating and submerged wood debris continue to be a major limitation to recreational use on the reservoir. Floating debris is a major local concern at Valemont.

The large drawdown is a significant problem in developing and maintaining boat launch areas as well as other water oriented recreation facilities.

The boat launch, parking and camping area at Horse Creek near Valemont are inadequate for that community, let alone tourist use which the area is attempting to attract.

Provision of additional Forest Service recreation sites in appropriate areas could encourage increased use by tourists, but the Ministry of Forests lacks the funds to develop these sites.



Kootenay Canal

KOOTENAY CANAL

1.0 LOCATION

The Kootenay Canal project is located on the south side of the Kootenay River about midway between Nelson and Castlegar. Access is gained from Highway 3A-6, which follows the north side of the Kootenay River, and a secondary road that crosses the river near the power house.

2.0 LAND STATUS

B. C. Hydro owns the land surrounding the canal. This land borders the Kootenay River for about 1 km at each end of the canal. Most of the lands along the river and main roads in the area are private holdings with commercial, residential and recreational uses. The land and the four power plants on the north side of the river immediately opposite the canal are held by West Kootenay Power and Light Company. The City of Nelson operates the fifth power plant on the south side of the river opposite the Upper Bonnington plant.

3.0 GENERATION FACILITIES

The 5 km long Kootenay Canal diverts Kootenay River water at the Corra Linn Dam, past three existing power plants to a 20 m high concrete dam, four 238 m penstocks and a 529,200 kW capacity power house, where the water rejoins the Kootenay River. The canal is concrete and rock-lined with sheer, steeply-sloping sides. The water for this project is available as a result of storage behind Duncan and Libby dams.

4.0 RECREATION PERSPECTIVE

The canal is along a scenic and interesting stretch of the Kootenay River containing six hydroelectric projects. The area is readily accessible by heavily travelled Highway 3A-6. Water flow on both the river and the canal are too swift to permit water-based activity. The steep sides and swift flow of the canal necessitate access restriction.

5.0 RECREATIONAL OPPORTUNITIES

The only opportunity for recreation in the canal area is viewing the energy project(s).

6.0 RECREATIONAL DEVELOPMENTS

With the exception of a Kootenay Canal project information sign and pullout along the highway, there are no recreational developments in this area.

7.0 USE

There is no recreational use in this area, except for hydro project viewing by travellers through the area.

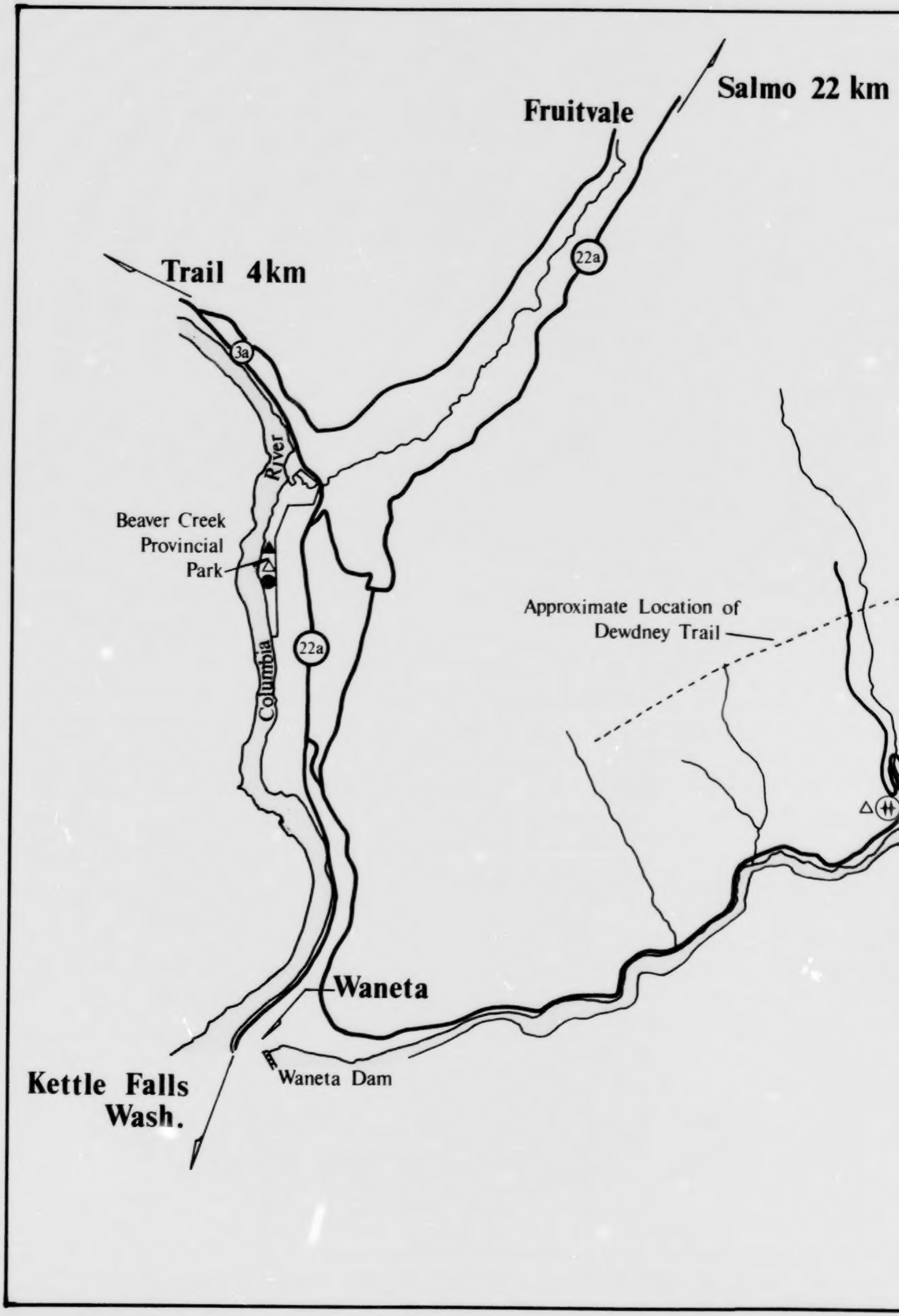
8.0 DEVELOPMENT POTENTIAL

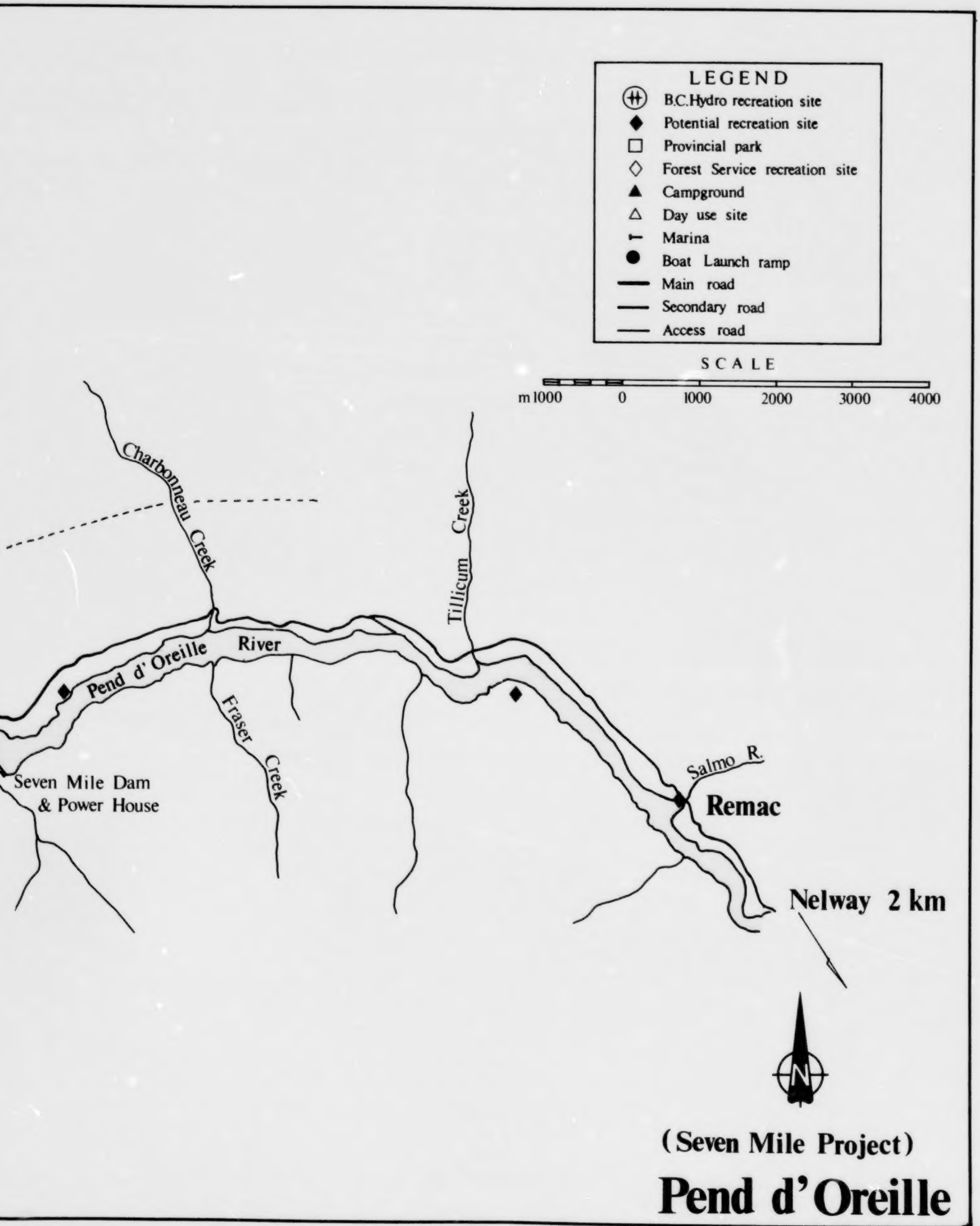
Recreational potential in this area is limited to a hydroelectric project viewing and interpretive facility, possibly including picnicking facilities.

Public tours of the generating facilities are being considered.

9.0 ISSUES

Safety along the canal is a major issue.


Salmo 22 km
Fruitvale
Trail 4km
3a
22a
River
Beaver Creek
Provincial
Park
Columbia
22a
Approximate Location of
Dewdney Trail
Waneta
Waneta Dam
Kettle Falls
Wash.



(Seven Mile Project)

Pend d'Oreille

PEND D'OREILLE RESERVOIR

1.0 LOCATION

The Pend d'Oreille Reservoir is located about 20 km southeast of Trail on the Pend d'Oreille River. The reservoir extends easterly and southerly from the Seven Mile Dam almost to the Canada-U.S.A. border at the site of Seattle City Light's Boundary Dam.

Access to the reservoir is via the Waneta-Nelway Road.

2.0 LAND STATUS

B. C. Hydro owns much of the land flanking the Pend d'Oreille reservoir. Land on the east side of the reservoir south of the Salmo River is privately-owned. Other land on the west shore, at the top end of the reservoir is Crown-owned.

3.0 GENERATION FACILITIES

The 65 m high, 437 m long concrete Seven Mile Dam is the middle of three projects on the Pend d'Oreille River.

The power house contains three generators producing 607,500 kW.

This is a run-of-the-river project with an allowable maximum daily drawdown of 10 m. Daily fluctuations generally occur in the top 3 m.

4.0 RECREATION PERSPECTIVE

The Pend d'Oreille valley is a scenic area with high wildlife values and easy access to the south facing north bank. The reservoir is considered to have moderate recreational potential with lack of sport fish, steep banks and current bank instability being significant limitations to recreational use.

5.0 RECREATIONAL OPPORTUNITIES

Recreational opportunities in the Pend d'Oreille valley include hunting, viewing (scenery and wildlife) and canoeing.

6.0 RECREATIONAL DEVELOPMENTS

Other than two viewpoints developed at the Seven Mile Dam by B. C. Hydro, no formal recreation facilities exist on the Pend d'Oreille reservoir.

7.0 USE

The amount of recreational use in the valley is estimated to be slight. Various easily accessible, informal recreation sites reveal evidence of little casual use.

8.0 DEVELOPMENT POTENTIAL

Two recreational developments have been proposed by B. C. Hydro as fulfillment of requirements established in the Seven Mile project water licence. These proposals include the development of camping, picnicking, swimming, boating and hiking facilities on lot 7193 at the west end of the reservoir. Facilities are also proposed for camping, picnicking, boating and hiking at the east end of the reservoir near the Salmo River.

The Dewdney historic trail along the north shore of the reservoir has potential for development as a heritage feature.

An industrial boat launch has been built by B. C. Hydro. This ramp has been located to ultimately serve as a public facility.

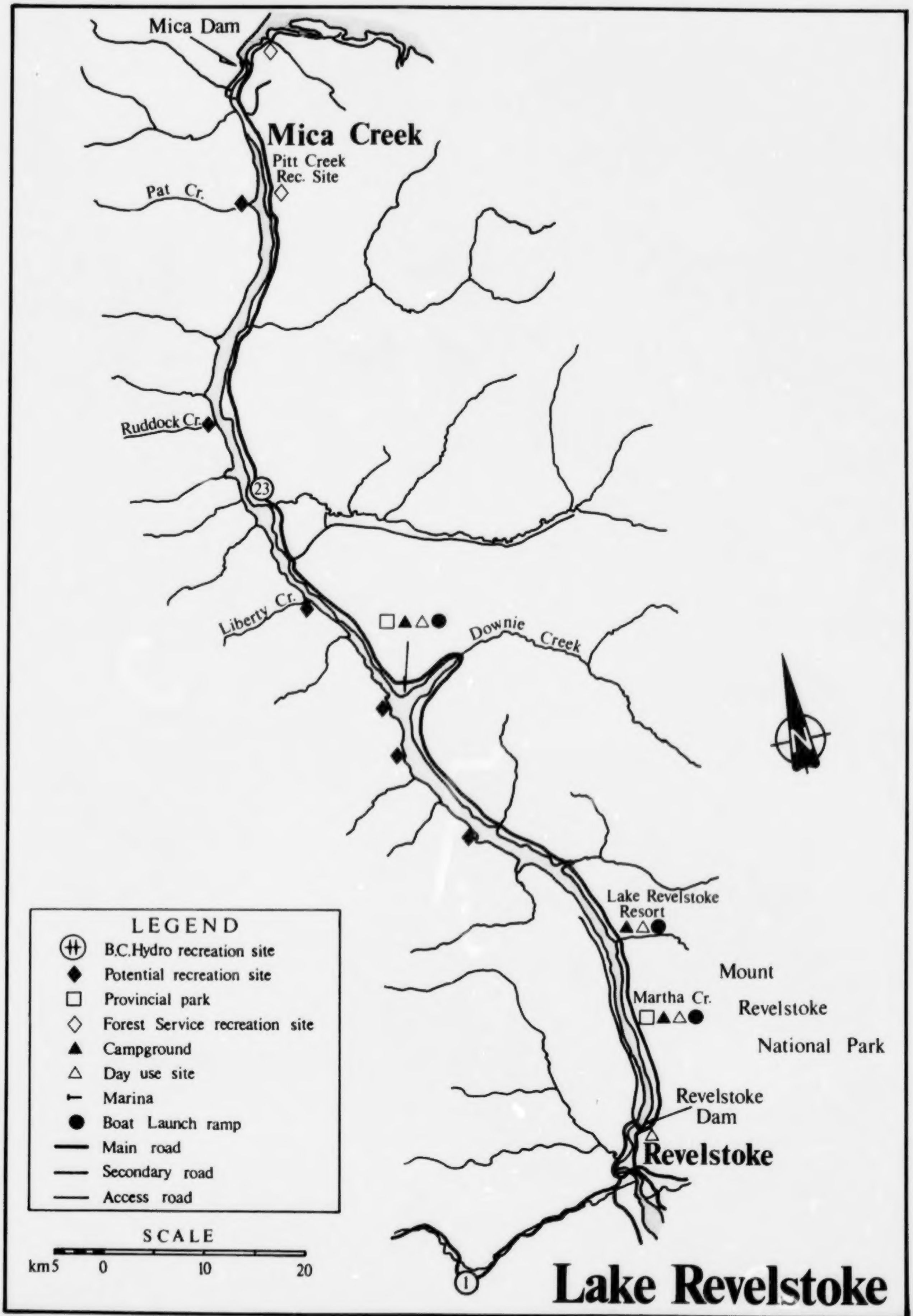
9.0 ISSUES

In August 1974 Conditional Water Licence No. 42962 was issued authorizing the Seven Mile Project. Clause (o) of this licence requires that B. C. Hydro provide and maintain public access to the headpond and its related recreational facilities as directed by the Comptroller of Water Rights. Direction by the Comptroller has not been forthcoming and consequently Hydro's proposals have been deferred.

The original filling of the Pend D'Oreille reservoir created some shoreline instability, most notably in the vicinity of 7193. The proposed 4.6 m increase in reservoir operating level may result in further instability and, accordingly, public use of the reservoir and shoreline areas would be restricted for a period of two years.

This reservoir does have recognized recreational potential and the current low use levels may reflect the lack of facilities and concern for public safety rather than lack of potential demand.

While development of B. C. Hydro's proposed facilities on the reservoir may be impractical given the current reservoir raising project, some area residents expect Hydro to begin fulfulling its obligations contained in the Water Licence.



Lake Revelstoke

REVELSTOKE LAKE

1.0 LOCATION

The Revelstoke Dam is located on the Columbia River about 7 km upstream from the City of Revelstoke. The long, narrow reservoir extends about 130 km to the Mica Dam.

The Trans-Canada Highway provides access to the area from the east and west, and Highway 23 joins the Trans-Canada at Revelstoke from the south.

Highway 23 (to the Mica Dam) parallels the east side of the reservoir and a forestry road provides access to the lower west side.

2.0 LAND STATUS

B. C. Hydro owns the land around the dam and at the head of the reservoir. Mount Revelstoke National Park is located just east of the damsite. Provincial Parks are located at Downie Creek, Martha Creek and near the damsite. Several private holdings are located along the reservoir (at Downie Creek) and near the junction with the Goldstream River. The remaining land around the reservoir is Crown owned, and under various forestry use tenures.

The City of Revelstoke owns a landfill site immediately west of the dam.

3.0 GENERATING FACILITIES

Facilities include the 175 m high earthfill and concrete dam, spillway, intakes and 1,843 MW capacity power house.

The plant normally operates in balance with the Mica power station and, hence, reservoir fluctuation is normally limited to 4.5 m.

Water level change from 1 to 5 m can occur within a 24-hour period.

4.0 RECREATION PERSPECTIVE

This is a large, scenic reservoir in a semi-wilderness area. Its various features, easy accessibility and variety of recreational opportunities make this an area of increasing recreational attraction.

Use patterns are just developing in this new area but several recreation sites have been identified for development, as required.

5.0 RECREATIONAL OPPORTUNITIES

This lake provides opportunities for boating, fishing, camping, picnicking, hiking, canoeing and sightseeing.

6.0 RECREATIONAL DEVELOPMENTS

Two provincial parks at Martha Creek and Downie Creek provide camping, picnicking and boat ramps, while a third park at the dam provides picnicking and viewing. The Forest Service recreation site at Pitt Creek provides camping and picnicking. Lake Revelstoke Resort on the east side of the lake about 20 km north of the dam will provide camping, picnicking and a boat ramp. Several hiking trails are available on the east side of the lake and numerous reservoir access points exist all along Highway 23 to the Mica Dam.

7.0 USE

Use data for 1987 for the provincial parks are as follows:

Columbia View Provincial Park

Day Use Only
52,528 user-days

Martha Creek Provincial Park

Day Use	Camping
27,486 user-days	3,539 party-nights

Downie Creek Provincial Park

Day Use	Camping
5,278 user-days	2,352 party-nights

Day use levels appear to be on the increase. Camping is expected to increase as facilities on this relatively new reservoir become better known.

The Forest Service site at Pitt Creek receives low use, but use is expected to increase as the fish population grows.

8.0 DEVELOPMENT POTENTIAL

Further potential for recreational development exists in this area subject to demand. The Forest Service has selected six areas on the west side of the lake with potential for water access recreation sites. Intentions are to provide two to four campsites at each area complete with picnic tables, fire rings and out-house.

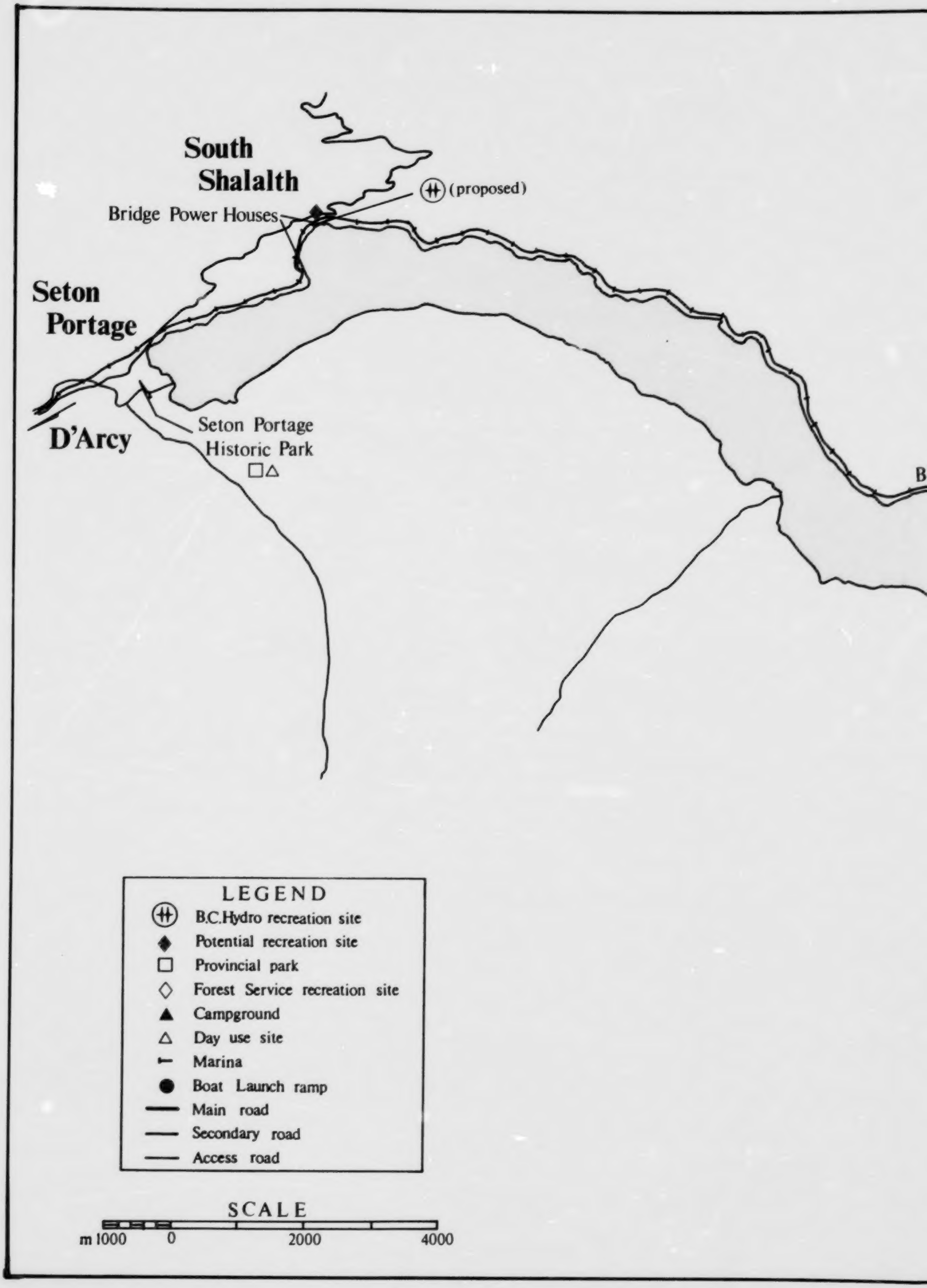
The Forest Service site at Pitt Creek is scheduled to become a provincial park.

B. C. Parks plans to develop a day use area with boat ramp 2 to 3 km north of the dam.

9.0 ISSUES

Level and type of demand for facilities and adequate funds for development, will be major issues in determining future recreational development on this lake.

A comprehensive reservoir safety program, including all parties involved in promoting recreational use of the reservoir, should be considered.


South Shalalth
Bridge Power Houses
(proposed)
Seton Portage
D'Arcy
Seton Portage Historic Park
B
LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
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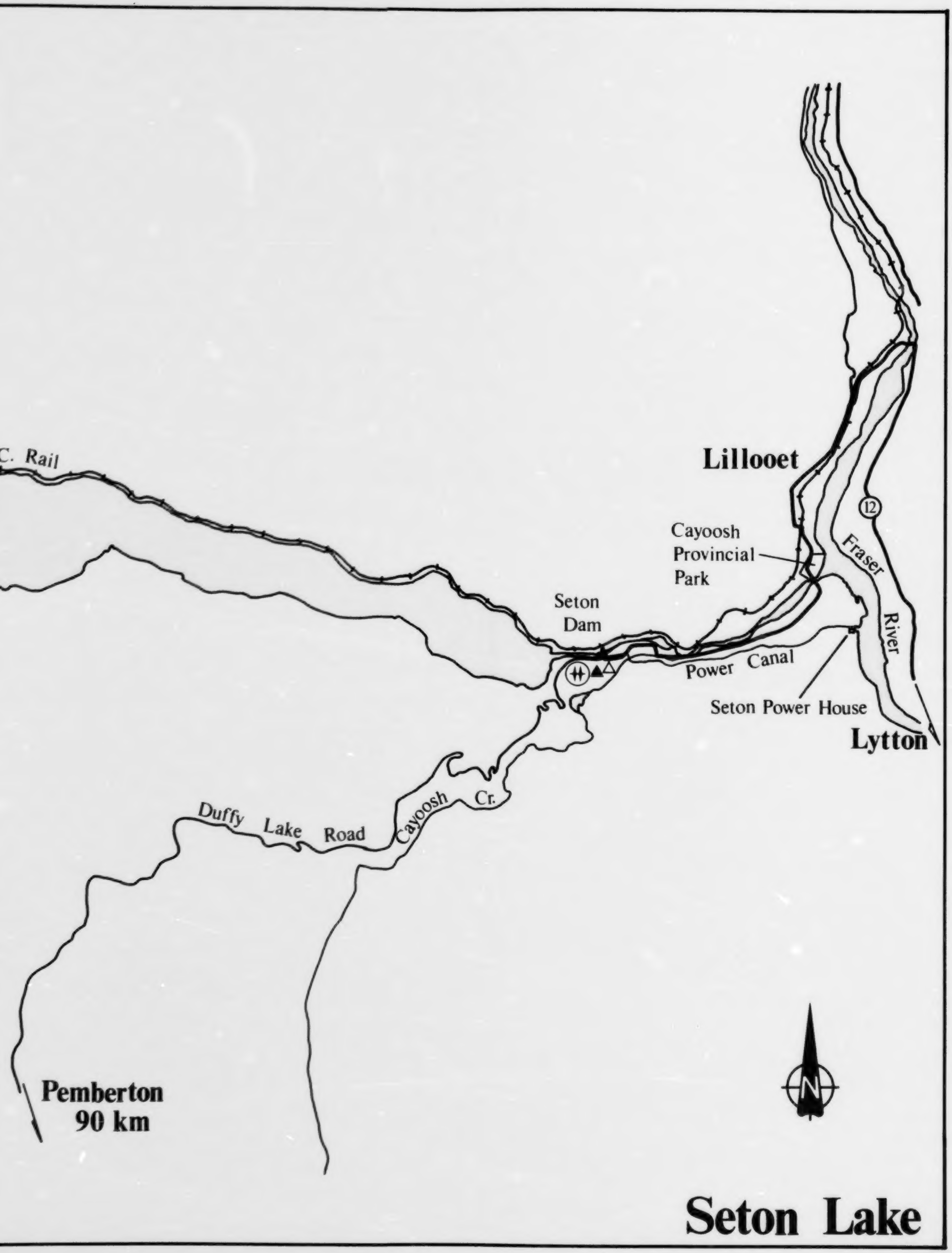

C. Rail
Lillooet
12
Cayoosh Provincial Park
Fraser River
Seton Dam
Power Canal
Seton Power House
Lytton
Duffy Lake Road
Cayoosh Cr.
Pemberton 90 km
N

Seton Lake

SETON LAKE

1.0 LOCATION

Seton Lake is located within the Chilcotin Range of the Coast Mountains, between the communities of Seton Portage and Lillooet. Carpenter Lake lies to the northwest, 4 km from Seton Lake.

Access to the east end of the lake is provided by Highway 12 from Lytton or the Duffy Lake Road heading northeast from Pemberton.

Seton Portage and Shalalth at the west end of the lake are served by a B. C. Hydro access road from Terzaghi Dam. B. C. Rail's line from North Vancouver runs along the northern shoreline of Seton Lake en route to Lillooet.

2.0 LAND STATUS

The lands surrounding Seton Lake are primarily held by the Crown. B. C. Hydro owns land at South Shalalth and a series of parcels extending from the east end of Seton Lake to the powerhouse on the Fraser River.

Several Indian Reserves are also located on the shoreline of Seton Lake.

3.0 GENERATING FACILITIES

Seton Dam is the last in a series in the Bridge River hydroelectric system. This development consists of an 18 m high concrete dam incorporating a fish ladder, diversion tunnel and a power canal which directs water to the 42,000 kW powerhouse on the Fraser River.

Average drawdown of Seton Lake is 0.6 m.

4.0 RECREATION PERSPECTIVE

Seton Lake is an attractive area for outdoor recreation with minimal drawdown and an absence of debris. Although steep banks and poor access limit shoreline development on the main body of the lake, recreational use occurs at the eastern and western ends of the lake.

This lake offers the only nearby beach to the community of Lillooet. Cayoosh Park on the Fraser River at Lillooet is about 5 km from this beach.

Seton Portage at the west end of the lake has historic significance as a major transportation link between Seton Lake and Anderson Lake on the Goldrush Trail.

5.0 RECREATIONAL OPPORTUNITIES

Recreational opportunities on Seton Lake include camping, picnicking, swimming, fishing, hiking, sight-seeing, and heritage appreciation.

6.0 RECREATIONAL DEVELOPMENTS

The following recreation facilities have been developed on the lake by B. C. Hydro:

Seton Beach	244 m developed beach +/- 100 vehicle parking lot picnic areas 1 hand pump 4 pit toilets
Seton Viewpoint	18 vehicle parking lot 1 km cultural & historic interpretive trail
Cayoosh Creek Campground	29 campsites 5 vehicle day use parking lot playing field 4 pit toilets water system 3.5 km trail system

There is also a Forest Service boater access recreation site about midway on the south shore of the lake.

7.0 USE

Seton Lake is heavily used for boating and water skiing. Fishing is a minor activity.

Total visits to the B. C. Hydro recreation facilities are as follows:

Year	Visitor Days	Visitor Nights	Total Visitors
1981	14,000	N/A	14,000
1982	15,400	600	16,000
1983	20,000	1,400	21,400
1984	22,000	2,200	24,200
1985	29,336	2,861	32,197
1986	16,084	2,592	18,676
1987	33,124	3,407	36,531

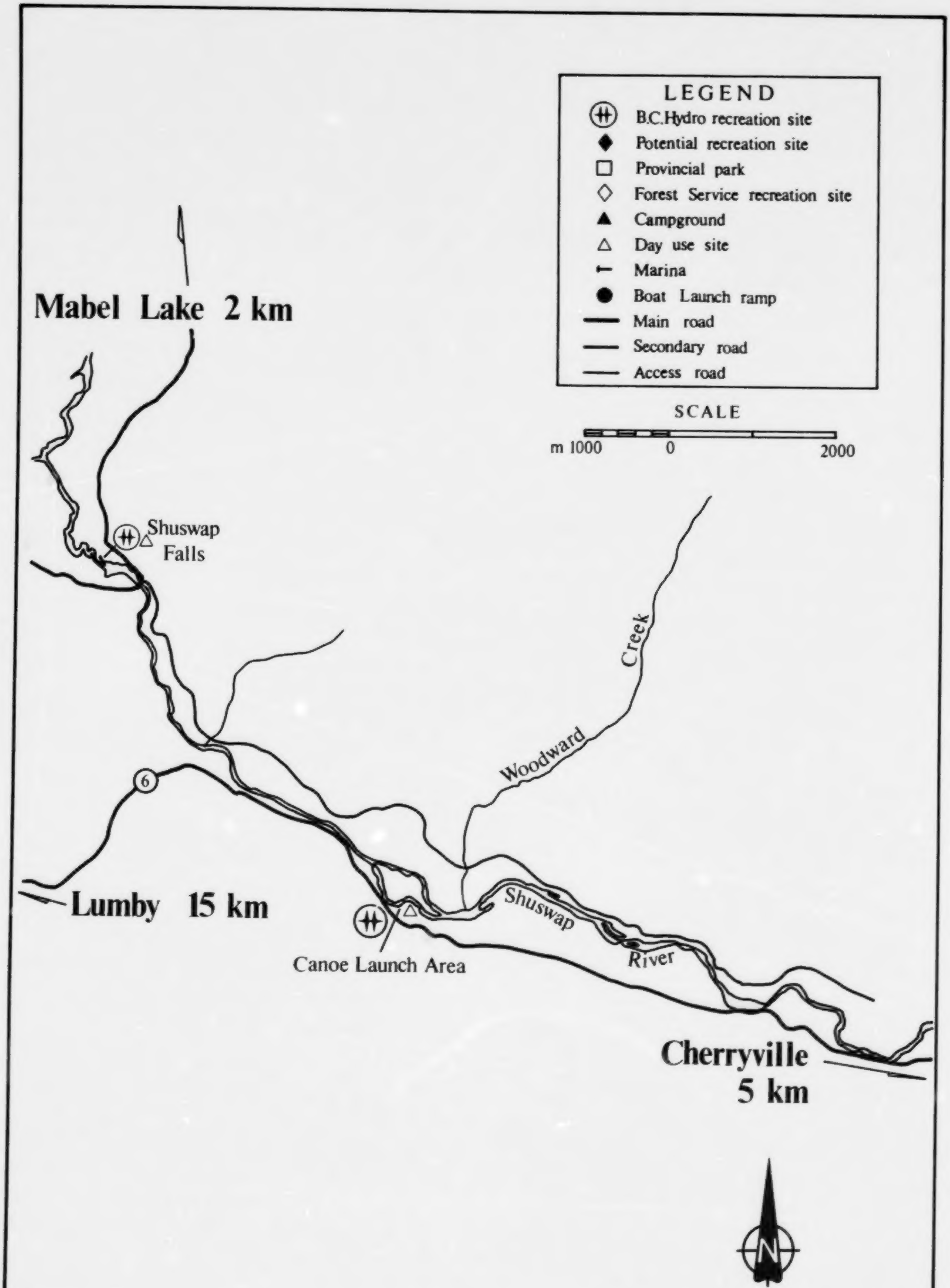
8.0 DEVELOPMENT POTENTIAL

Recreational use of Seton Lake can be enhanced by expanding both the day use parking lot at Seton Beach and Cayoosh Creek campground. Development of a beach and picnic area is proposed by B. C. Hydro staff at South Shalalth.

B. C. Parks plans to improve the interpretive material on the Goldrush Trail at Seton Portage Historic Park.

9.0 ISSUES

Lack of road access along the lake is a major impediment to further recreational development.



Shuswap Falls

SHUSWAP RIVER

(Shuswap Falls to Brenda Falls)

1.0 LOCATION

The Shuswap River flows a generally southerly, then westerly, and finally northerly direction from Sugar Lake to Mable Lake. Shuswap Falls is located approximately 5 km south of Mable Lake and 30 km east of Vernon. Brenda Falls is located at the outlet of Sugar Lake.

The western section of the river, including Shuswap Falls is accessible from the Mable Lake Road. The central section is accessible from Highway 6 and the eastern portion is accessible from the Sugar Lake Road.

2.0 LAND STATUS

Land in the Shuswap River valley between Mable Lake and Sugar Lake is predominantly privately owned. B. C. Hydro owns a nearly continuous strip of land straddling the Shuswap River for a distance of 7 km upstream of the Wilsey Dam.

3.0 GENERATING FACILITIES

The 21 m high Wilsey Dam is located at Shuswap Falls. The power plant is situated immediately downstream of the dam and spillway. Flows in the Shuswap River above Wilsey Dam are controlled by the Brenda Falls Dam at Sugar Lake.

4.0 RECREATION PERSPECTIVE

The Shuswap River corridor is readily accessible and has a number of scenic and attractive recreational features including small, scenic canyons and good fishing.

5.0 RECREATIONAL OPPORTUNITIES

Recreational opportunities available in the Shuswap River corridor include canoeing, rafting, hiking, swimming, fishing and picnicking. Man-made features such as the Shuswap Falls power house and spillway are of historical and visual interest.

6.0 RECREATIONAL DEVELOPMENTS

B. C. Hydro has developed a picnic area, viewpoint and canoe portage trail at Shuswap Falls. It has also provided a river access point (for canoeists) and highway rest area adjacent to the river, near Cherryville.

Facilities include:

Shuswap Falls

- 40 car parking lot
- 10 picnic tables
- a canoe pullout (upstream of dam)
- a canoe launch (downstream of dam)
- canoe portage trail
- cantelevered viewpoint deck
- landscaped areas
- toilet and garbage facilities

Shuswap River

- 30 car parking lot
- 5 picnic tables
- canoe access point and chute portage (2 km downstream)

The Regional District of North Okanagan's Tolley Regional Park is located adjacent to B. C. Hydro downstream of the Wilsey Dam. The Regional District is developing picnicking facilities in the park. The Shuswap Falls fish hatchery is also located within Tolley Park.

7.0 USE

Attendance at B. C. Hydro recreation areas is as follows:

Year	Shuswap Falls	Shuswap River
1985	11,636	14,217
1986	13,161	15,681
1987	17,119	19,235

8.0 DEVELOPMENT POTENTIAL

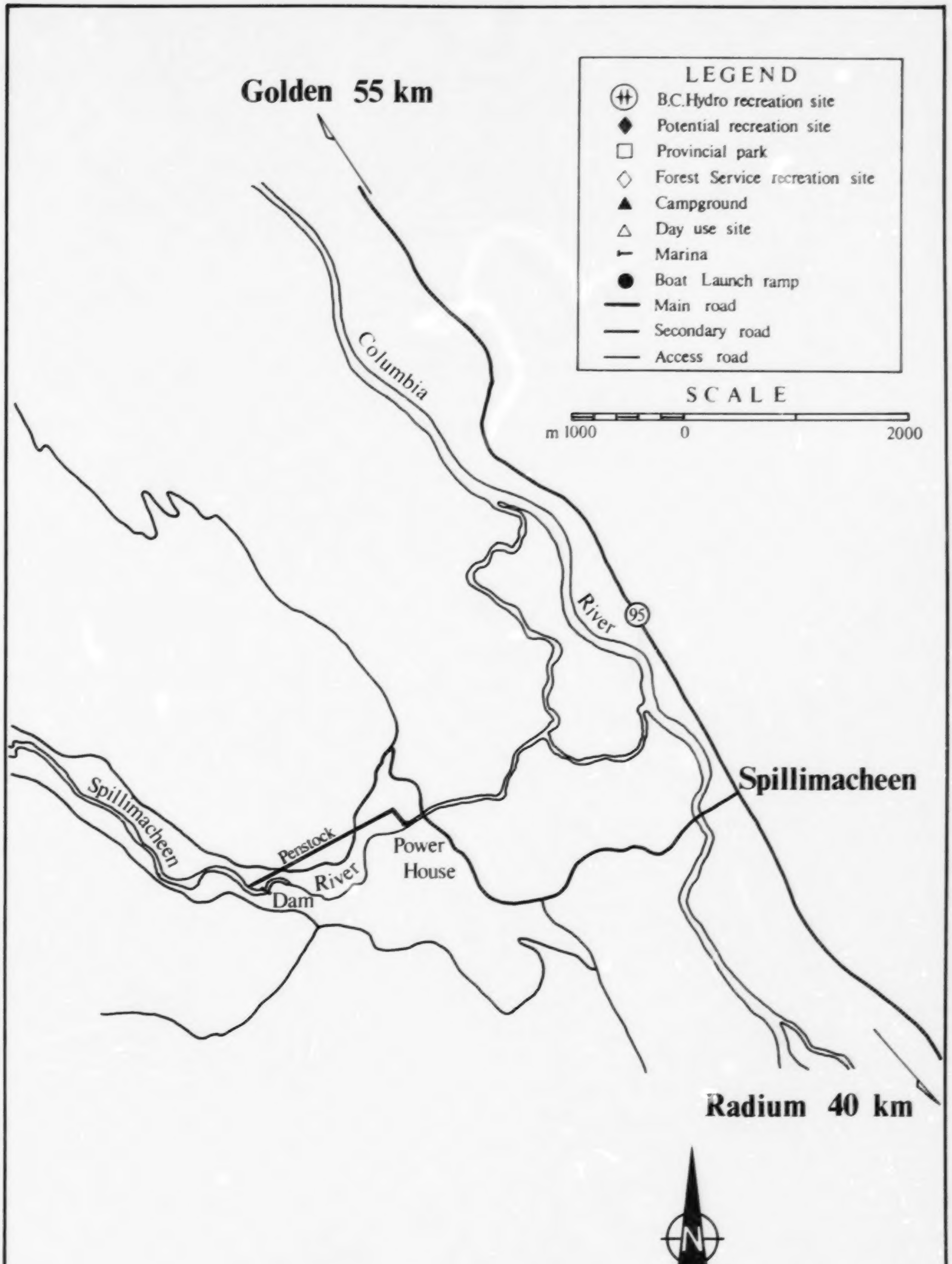
This river has further potential for development as a recreational corridor with the involvement of other agencies.

Further enhancement of existing B. C. Hydro facilities is a possibility.

9.0 ISSUES

In 1981 the Regional District of North Okanagan proposed the creation of a recreation corridor encompassing the Shuswap River from Sugar Lake to Mara Lake. Because of its extensive land holdings and recreation developments in the Shuswap Falls-Sugar Lake area B. C. Hydro was asked to participate in the planning and development stages of this proposal. Since the development of B. C. Hydro's Shuswap River canoe site near Cherryville in 1982 there has been little interest by all parties in the corridor concept. However, this could be reviewed with an increase in public use or interest.

Removal of silt from the headpond at Shuswap Falls may have an impact on the recreation area located on the right bank. The amount of silt to be removed exceeds the amount that can be released downstream. One alternative may be to infill portions of the recreation area. Impacts on the recreation area could be dealt with if the procedure were a one time event. Ongoing deposition of silt in the recreation area would be a significant impact.



Spillimacheen Diversion

SPILLIMACHEEN DIVERSION

1.0 LOCATION

The Spillimacheen Diversion is located west of the Columbia River valley opposite the town of Spillimacheen about 60 km south of Golden. A main forestry road which meets Highway 95 at Spillimacheen provides access to the site along the north side of the river. Branch logging roads give access to the south side of the river.

2.0 LAND STATUS

Land along the Spillimacheen River is primarily Crown-owned. B. C. Hydro owns land at the powerhouse and retains the right to operate and maintain its various generation facilities.

3.0 GENERATION FACILITIES

Facilities include a 9 m high concrete dam, two 1.5 km long penstocks, and a 4000 kW capacity power house near the edge of the Columbia River valley. This is a run-of-the-river project with little storage and drawdown. Frequent low water levels limit the period of maximum output to about 6 months annually.

4.0 RECREATION PERSPECTIVE

This small reservoir lies in a pleasant valley with easy access to Highway 95. Although the headpond is too small to permit much water-based activity, the area is considered to have moderate capability for recreation, particularly for winter sports.

5.0 RECREATIONAL OPPORTUNITIES

The headpond area provides opportunities for fishing, canoeing, viewing and snowmobiling. Fishing and snowmobiling are the major current recreational uses.

6.0 RECREATIONAL DEVELOPMENTS

There are no developments in the area at present.

7.0 USE

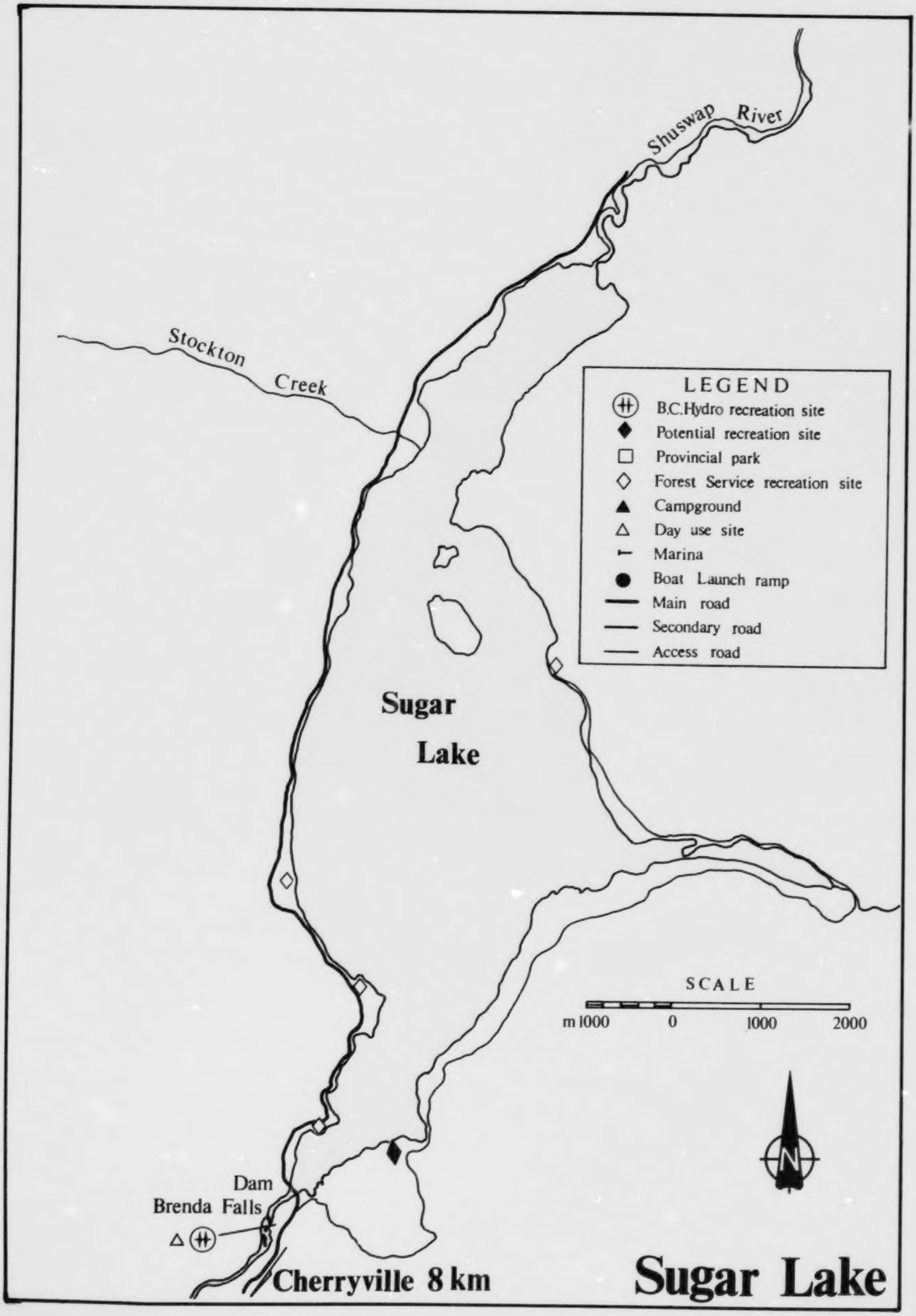
Some canoeing, kyaking and rafting occurs on the river, and the rafts are pulled out on the headpond. The valley is also used for fishing and snowmobiling, but no use data are available.

8.0 DEVELOPMENT POTENTIAL

While the physical resources of the area suggest potential for development, actual development will likely depend upon demand.

9.0 ISSUES

The major issue in this area is likely to be whether actual demand would warrant development of specific recreational facilities.


Shuswap River
Stockton Creek
LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
Sugar Lake
SCALE
m 1000 0 1000 2000
N
Dam
Brenda Falls
Cherryville 8 km
Sugar Lake

SUGAR LAKE

1.0 LOCATION

Sugar Lake is located in the Monashee Mountains, about 50 km east of Vernon.

Road access to the reservoir is provided by a good secondary road that meets Highway 6 at Cherryville. The road also extends up the entire west side of the lake. Active logging in the area keeps this road open throughout the winter. Other forestry access roads extend approximately half-way along the east side of the reservoir.

2.0 LAND STATUS

A large part of the land bordering Sugar Lake is Crown-owned. B. C. Hydro owns seven properties around the reservoir including the two islands. Hydro also holds a Crown reserve at the southern end around Brenda Falls. There are many active timber licences around the reservoir held by several companies including Weyerhauser and Crown Zellerbach. Many cabins border the west side of the reservoir, some of which are located on Hydro property. There is also a large private holding at the southeast end of the reservoir.

3.0 GENERATION FACILITIES

The Sugar Lake Dam impounds water from the Shuswap River to feed the Shuswap Falls Powerplant 30 km downstream and to assist in flood control.

Average yearly drawdown is 7 to 8 m with full pool usually reached in the early summer and maintained until the fall.

4.0 RECREATION PERSPECTIVE

Sugar Lake is a very popular recreation area for residents of the southern interior as well as for tourists from Alberta and the United States. It is an attractive area, easily accessible, and offers an appealing recreational water resource.

5.0 RECREATIONAL OPPORTUNITIES

Opportunities for recreational use include swimming, boating, water skiing, fishing, picnicking and camping.

6.0 RECREATIONAL DEVELOPMENTS

The Ministry of Forests has developed one major and three minor sites on Sugar Lake, one on the east side and three on the west side.

The largest site, located on the west side is a destination campsite with the following facilities:

50 to 60 campsites
30 picnic tables
12 pit toilets
boat launch

B. C. Hydro has developed a viewpoint and small picnic area overlooking the Brenda Falls Dam.

Facilities include:

- 5-car parking
- 4 picnic tables
- 1 pit toilet
- 2 information displays

A privately operated fishing camp is located on the west side of Sugar Lake near the south end of the lake.

7.0 USE

The Forest Service estimates that there are approximately 10 to 12,000 user-days annually at its sites.

User statistics are not maintained for B. C. Hydro's Brenda Falls Dam viewpoint.

During peak use periods B. C. Hydro's property at the south end of the lake (D.L. 4292) and at the viewing area receives casual and unregulated overnight use.

There is considerable camping at pullouts along the west-side road.

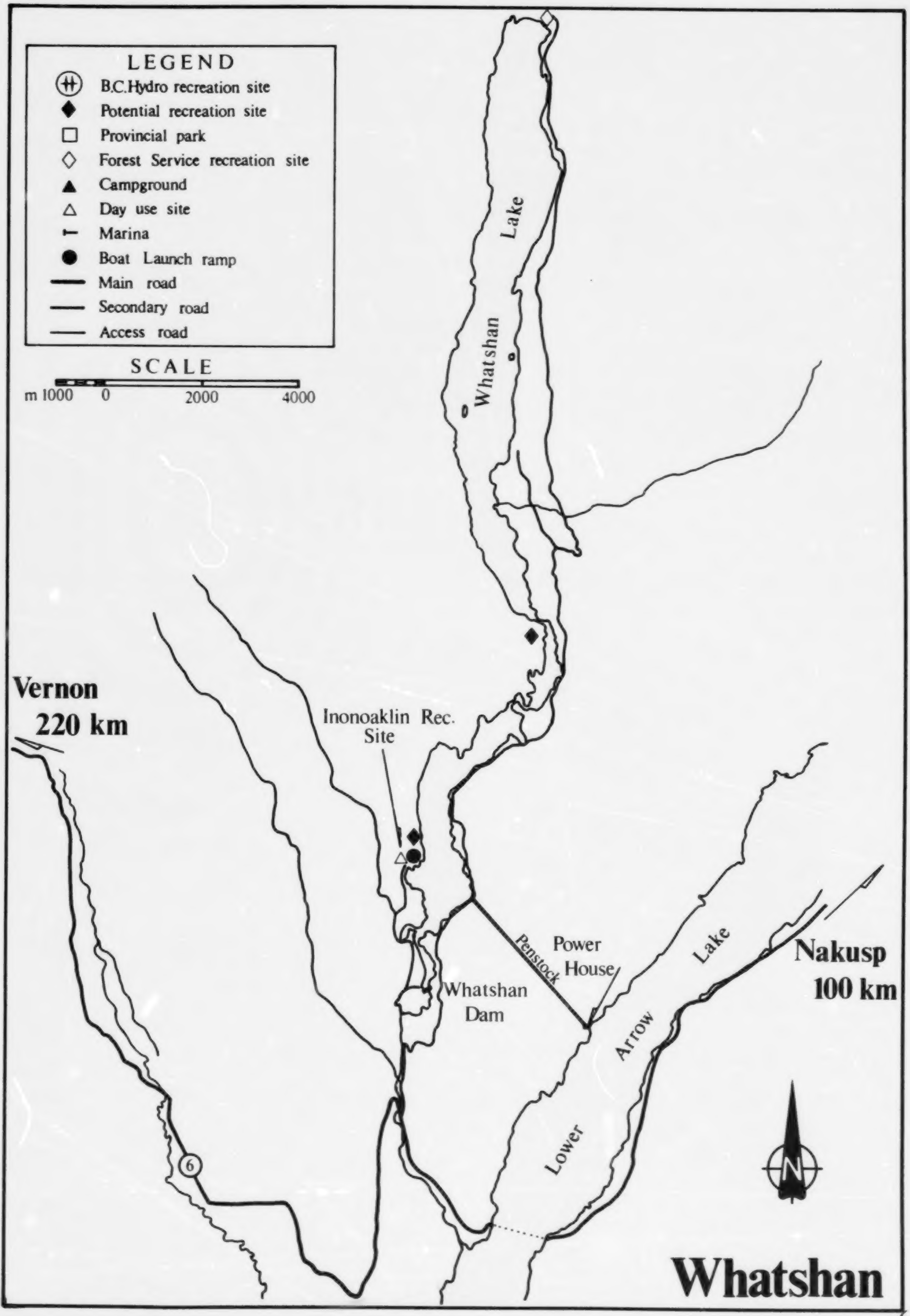
8.0 DEVELOPMENT POTENTIAL

The Ministry of Forests believes that there is potential for development of additional public facilities on Sugar Lake but has a policy not to expand its sites because of the privately operated facilities located there.

B. C. Hydro's property at the south end of Sugar Lake (D.L. 4292) has potential for development of recreational facilities with particular emphasis on camping.

9.0 ISSUES

Sugar Lake is a popular area for lake-oriented recreational activities in the north Okanagan. At the present time use in the area exceeds the supply of developed facilities. Expansion of facilities, particularly by the Ministry of Forests, has not been undertaken in order to minimize conflict with private operators in the area.


LEGEND
B.C.Hydro recreation site
◆ Potential recreation site
□ Provincial park
◇ Forest Service recreation site
▲ Campground
△ Day use site
Marina
● Boat Launch ramp
Main road
Secondary road
Access road
SCALE
m 1000
0
2000
4000
Whatshan Lake
Vernon 220 km
Inonoaklin Rec. Site
6
Penstock
Power House
Whatshan Dam
Lower Arrow Lake
Nakusp 100 km
N
Whatshan

WHATSHAN LAKE

1.0 LOCATION

Whatshan Lake is located in the Central Kootenays about 4 km northwest of the Needles-Fauquier ferry crossing of Arrow Lake. The Whatshan range of the Monashee Mountains lies along the western border of the reservoir.

A forestry road provides access to the lake 2 km north of Highway 6 that connects Nakusp with Vernon. This road provides access to the eastern shore, while a side road provides access to the southwest perimeter of the lake.

2.0 LAND STATUS

B. C. Hydro holds the lands adjacent to the damsite at the south end of the lake and along the penstock tunnel leading to the power house on Arrow Lake.

Several private lots developed with summer cottages are located on the southwest shore of the lake.

The majority of lands around Whatshan Lake are Crown lands within Tree Farm Licence 23.

3.0 GENERATING FACILITIES

A 10.7 m high by 183 m long dam impounds water supplied by the Whatshan River to form the reservoir. A 4 km long penstock carries the water to a power house on the west shore of Arrow Lake.

4.0 RECREATION PERSPECTIVE

Whatshan Lake is 20 km long with an average width of 1 km. Interesting views exist throughout the reservoir region. The small drawdown and the absence of debris on most of the lake contribute to the attractive appearance of the reservoir. Whatshan Lake does not support a significant sports fishery, although there are resident populations of Dolly Varden, Rainbow trout and kokanee.

This is a popular recreational lake and, to develop its considerable potential, B. C. Parks plans to establish a major destination campground on the south end of the lake.

5.0 RECREATIONAL OPPORTUNITIES

Whatshan Lake and area has opportunities for swimming, boating, picnicking and camping.

6.0 RECREATIONAL DEVELOPMENTS

The Forest Service maintains a recreation site with 11 vehicle units at the north end of the lake.

A small recreation area administered by the Inonoaklin Recreation Committee is located on D.L. 8593 on the southwest shore of Whatshan Lake. Facilities include a swimming beach, boat launch, change houses, and toilets.

A privately-owned fish camp has been in operation in the past.

7.0 USE

The Forest Service recreation site is heavily used. The provincial recreation reserve on the south end of the lake is popular with regional residents and tourists.

8.0 DEVELOPMENT POTENTIAL

The facility operated by the Inonoaklin Recreation Commission is a popular site that could be extended and enhanced.

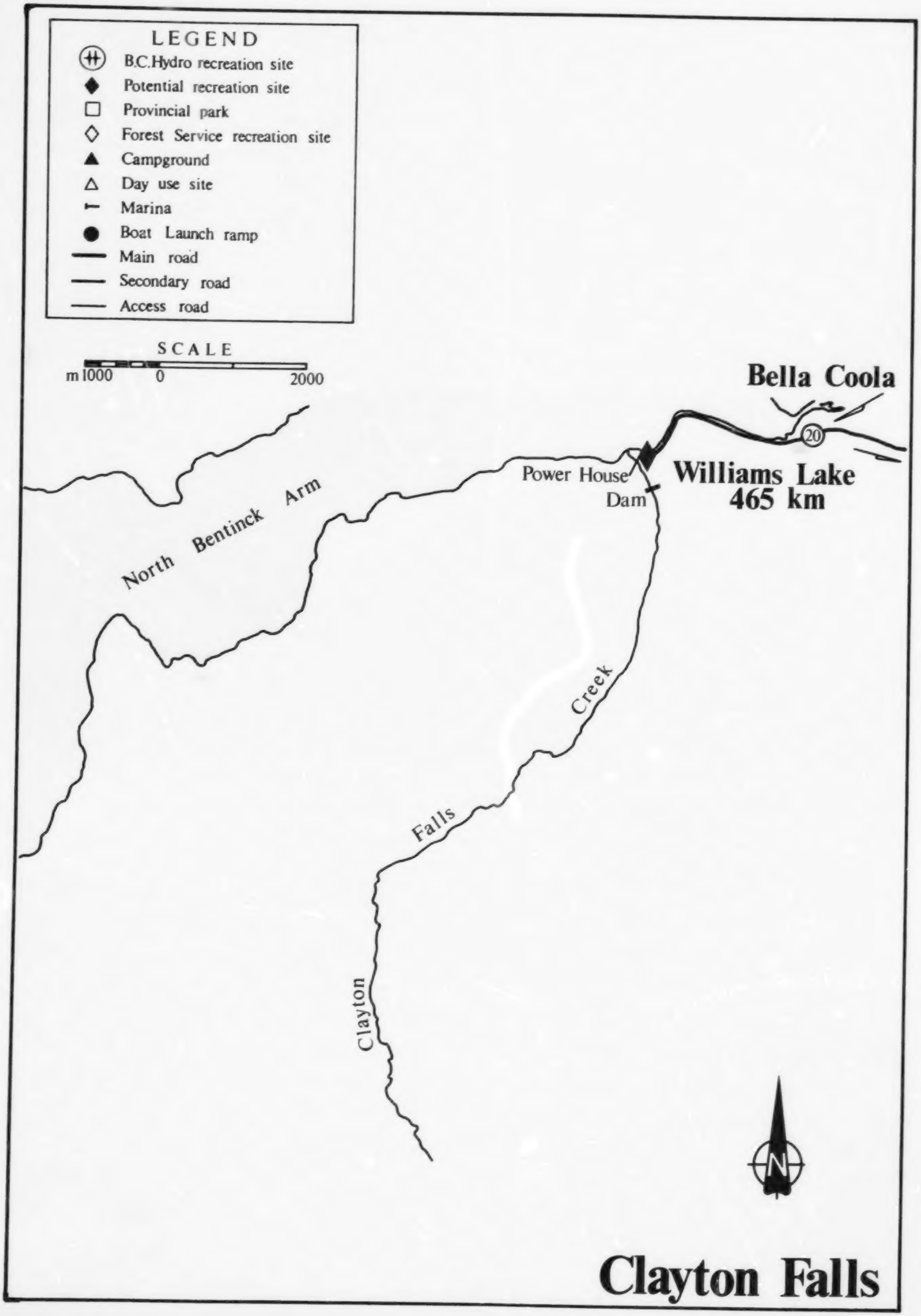
B. C. Parks plans a major destination campground on the existing park reserve on the south end of the lake. The existing Inonoaklin recreation area could become part of this park.

The Forest Service is interested in establishing a recreation site at the narrows in the lake.

The existing Forest Service recreation site at the north end of the lake can be expanded.

9.0 ISSUES

B. C. Hydro's Hydroelectric Engineering Division is assessing the potential for diverting Barnes Creek into Whatshan Reservoir. This proposal could have an impact on the Inonoaklin recreation area.


LEGEND
B.C.Hydro recreation site
◆ Potential recreation site
□ Provincial park
◇ Forest Service recreation site
▲ Campground
△ Day use site
Marina
● Boat Launch ramp
Main road
Secondary road
Access road
SCALE
m 1000
0
2000
Bella Coola
20
Power House
Dam
Williams Lake
465 km
North Bentinck Arm
Clayton Falls Creek
N
Clayton Falls

CLAYTON FALLS

1.0 LOCATION

Clayton Falls Headpond is located on Clayton Falls Creek about 5 km west of Bella Coola. A secondary road follows North Bentinck Arm from Bella Coola to the power house and a tote road provides access to the damsite from the power house.

2.0 LAND STATUS

B. C. Hydro owns 8 ha encompassing all generating facilities. A block of land west of the power house is owned by Hutchinson Brothers, and the rest of the land around the project is Crown-owned.

3.0 GENERATING FACILITIES

Facilities include a 3 m high wood plank dam, 576 m penstock and 700 kW capacity power house. There is no storage or drawdown on the headpond. This is a small, run-of-the-stream project which, to the extent water is available, displaces diesel fuel at the Bella Coola system.

4.0 RECREATION PERSPECTIVE

Clayton Creek Falls are considered a scenic feature. Wildlife numbers are low and there are few, if any, fish in the creek. Recreational use in the area is minimal.

5.0 RECREATIONAL OPPORTUNITIES

Opportunity for recreation is limited to sight-seeing, and picnicking. The Clayton Falls property owned by Hydro affords the only salt water access to the public in the vicinity of Bella Coola.

6.0 RECREATIONAL DEVELOPMENTS

There are no recreational developments at this project.

7.0 USE

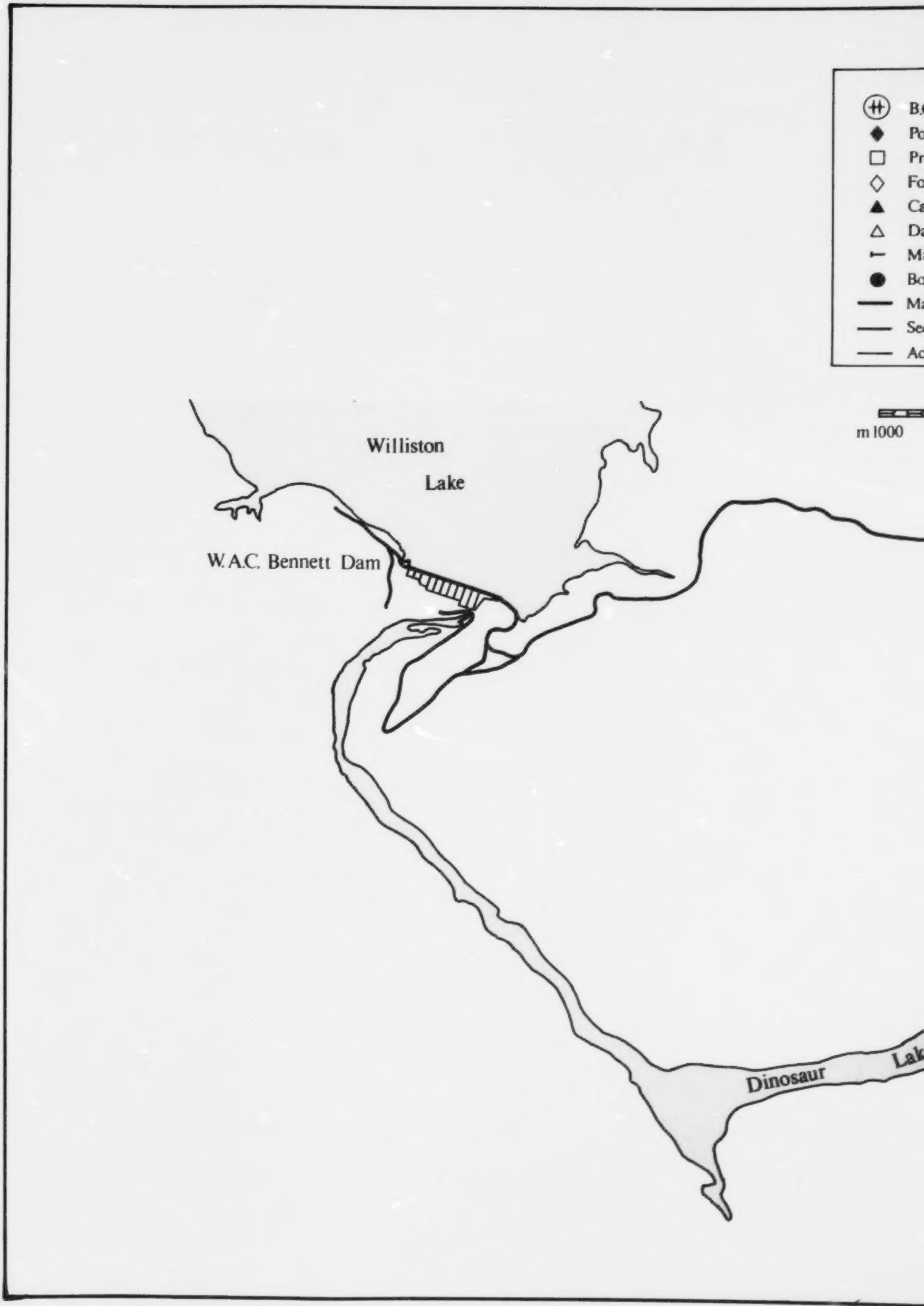
Recreational use in this area is limited to picnicking and viewing.

8.0 DEVELOPMENT POTENTIAL

It may be appropriate to establish a small picnic site below the dam adjacent to the shore of North Bentinck Arm.

9.0 ISSUES

There may be expansion of generating capacity at this site.


B.
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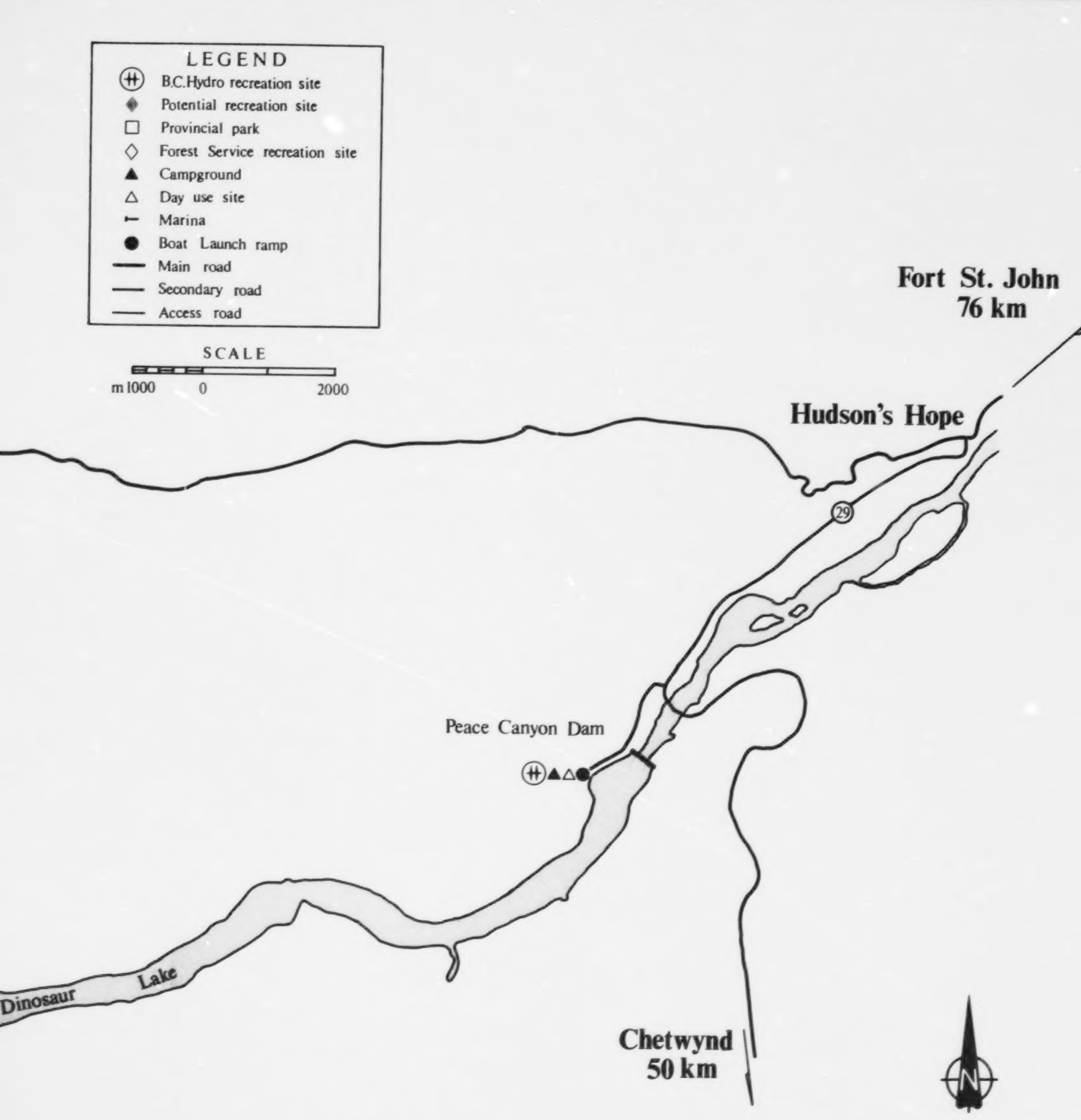
Ac
m 1000
Williston
Lake
W.A.C. Bennett Dam
Dinosaur
Lak



Dinosaur Lak

DINOSAUR LAKE
(PEACE CANYON)

1.0 LOCATION

Dinosaur Lake in the Rocky Mountain foothills extends 23 km from the WAC Bennett Dam to the Peace Canyon Dam 5 km west of Hudson's Hope.

Access to the dam is provided by a secondary road branching off from the John Hart Highway (Highway 29).

2.0 LAND STATUS

B. C. Hydro owns land on both sides of the reservoir adjacent to the damsite. The remaining land adjacent to the reservoir is Crown-owned.

Timber Sales Harvesting Licences and coal licences surround much of the reservoir.

3.0 GENERATION FACILITIES

The Peace Canyon Dam re-uses the water from the Williston Reservoir upstream and adds an additional 700 MW of generating potential to the B. C. Hydro system. The concrete dam is 55 m high and 533 m long, impounding a reservoir 23 km long and 1 km wide, just twice the width of the original riverbed. Reservoir drawdown varies from 0.3 m to 2.1 m.

4.0 RECREATION PERSPECTIVE

The Dinosaur Lake area is remote but has a number of opportunities for wilderness recreation, should demand warrant development.

Due to the steeply sloping terrain, access along the reservoir is limited to gas and electrical transmission line service roads.

The lake's sport fishing potential is being developed.

5.0 RECREATIONAL OPPORTUNITIES

Dinosaur Lake provides opportunities for boating, fishing, hunting, camping, and picnicking.

6.0 RECREATIONAL DEVELOPMENTS

A recreation area on the north bank near the damsite, originally developed and operated by B. C. Hydro, is now owned and operated by the District of Hudson's Hope. Facilities include picnic area, campsites, boat ramp and pit toilets.

B. C. Hydro has provided five or six rustic boater access campsites along the reservoir shoreline with picnic tables and barbeque pits. Hydro has also provided reservoir safety signs at these and other locations on the reservoir.

7.0 USE

Existing facilities are adequate for current use levels.

8.0 DEVELOPMENT POTENTIAL

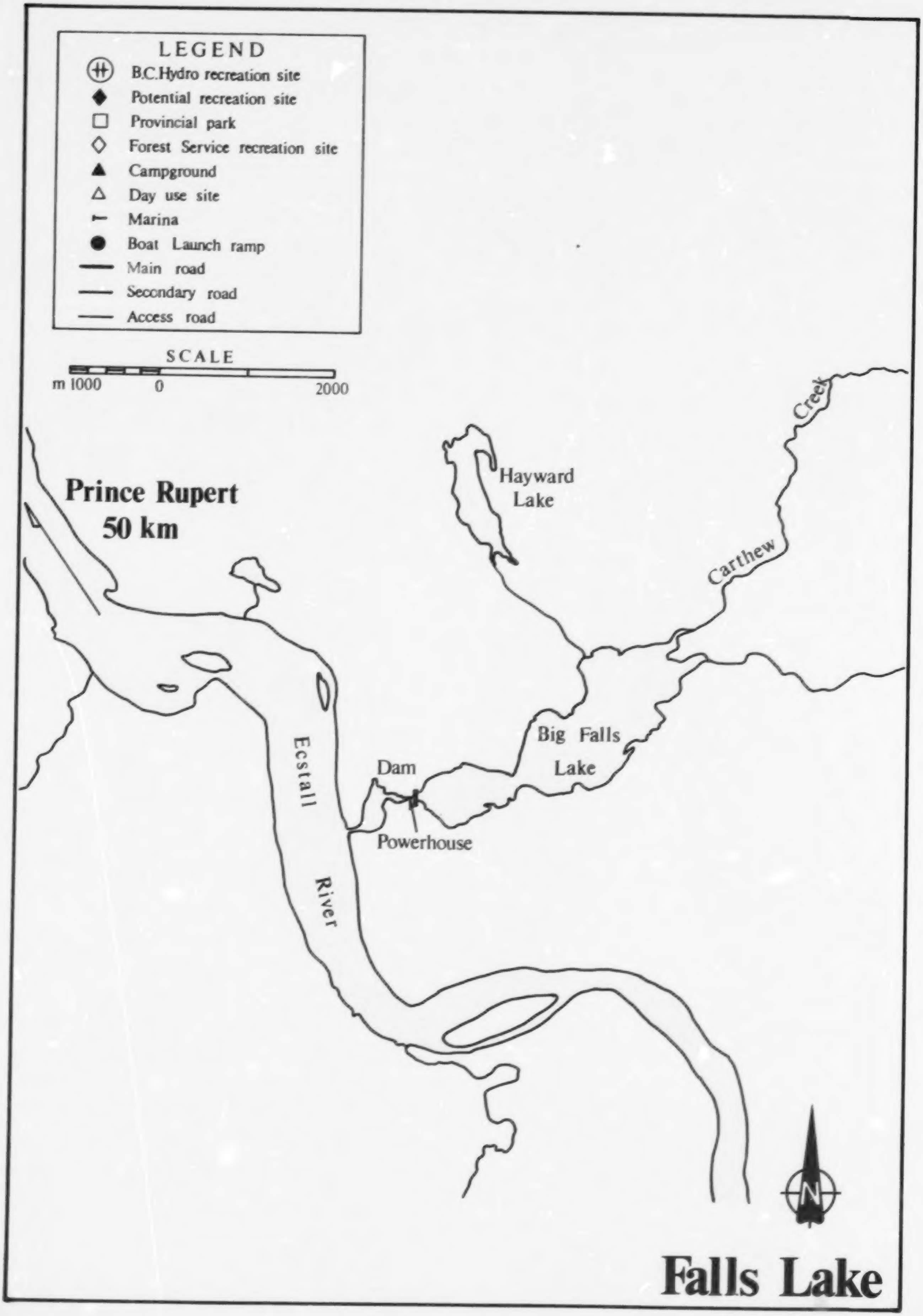
The existing recreation area near the damsite can be expanded, should that be required by demand. Provision to expand this facility is included in the transfer agreement between B. C. Hydro and B. C. Parks should use levels warrant. Other sites along the lake also have development potential.

9.0 ISSUES

Landslide hazard leads to periodic closing of the boat ramp.

Reservoir bank stability will be a concern if further recreational use is to be encouraged.

Submerged islands must be adequately marked to avoid navigational hazard.


LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
m 1000
0
2000
Prince Rupert
50 km
Hayward
Lake
Carthew
Creek
Big Falls
Lake
Dam
Powerhouse
Ecstall
River
N

Falls Lake

FALLS LAKE

1.0 LOCATION

Falls Lake is 50 km southeast of Prince Rupert. The reservoir flows into the Ecstall River, a tributary of the Skeena. Access to the reservoir is by air or water only.

2.0 LAND STATUS

B. C. Hydro lands encompass the generating facilities. Land around the reservoir is Crown-owned.

3.0 GENERATING FACILITIES

Facilities include 12 m high dam, spillway, 240 m long penstocks, and power house. The small reservoir undergoes rapid changes in level requiring spilling at any time.

4.0 RECREATION PERSPECTIVE

Recreational use is limited by access and is not significant at present. The tidal river does permit boater access to the project. The reservoir has a resident fish population and ungulates (primarily deer) are present in the area. Rapid spilling at the dam is a hazard to public use.

5.0 RECREATIONAL OPPORTUNITIES

Fishing, hunting and sight-seeing are recreational opportunities in this area.

6.0 RECREATIONAL DEVELOPMENTS

There are no recreational developments at this project.

7.0 USE

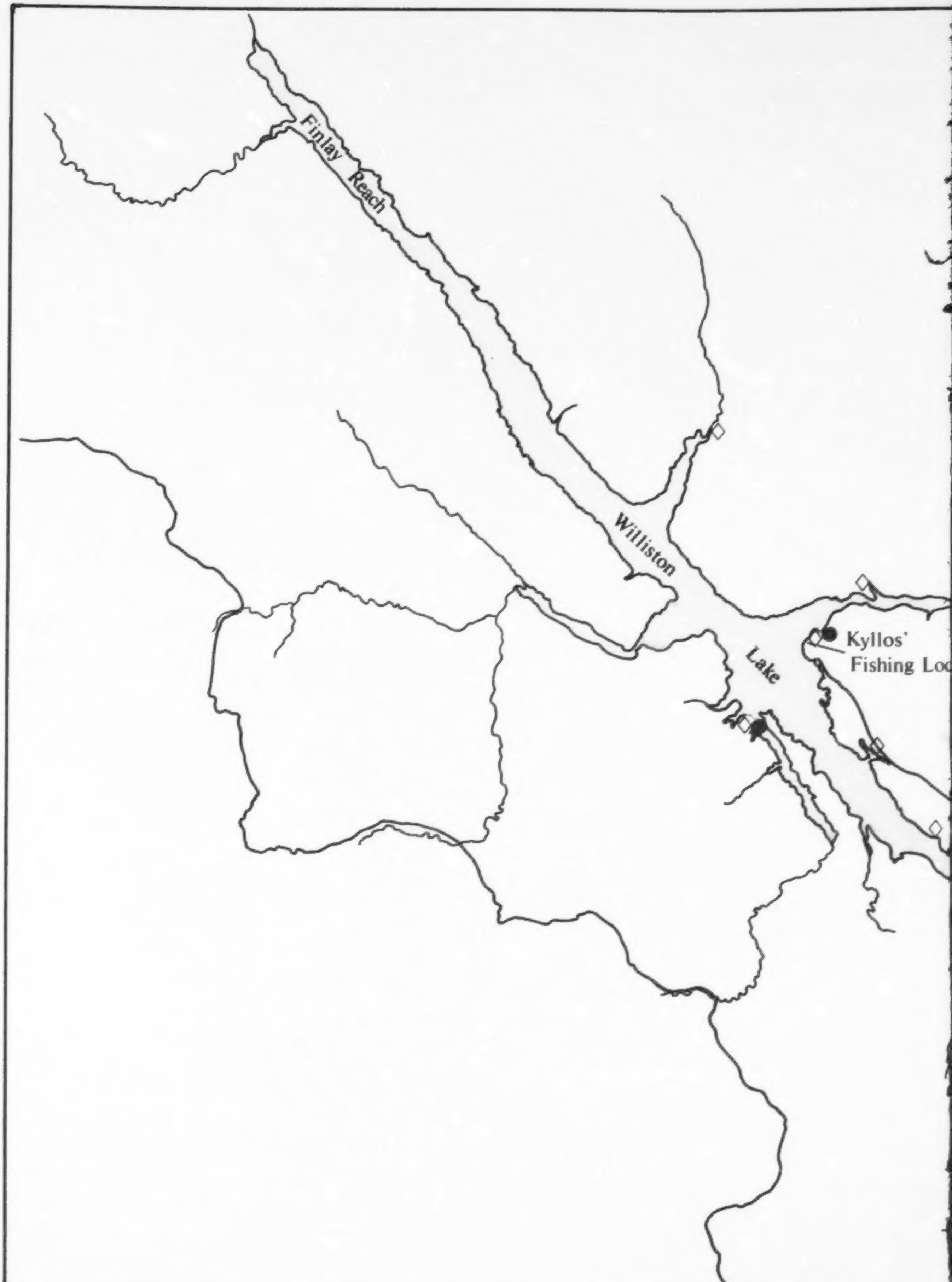
Recreational activity at this lake is minimal.

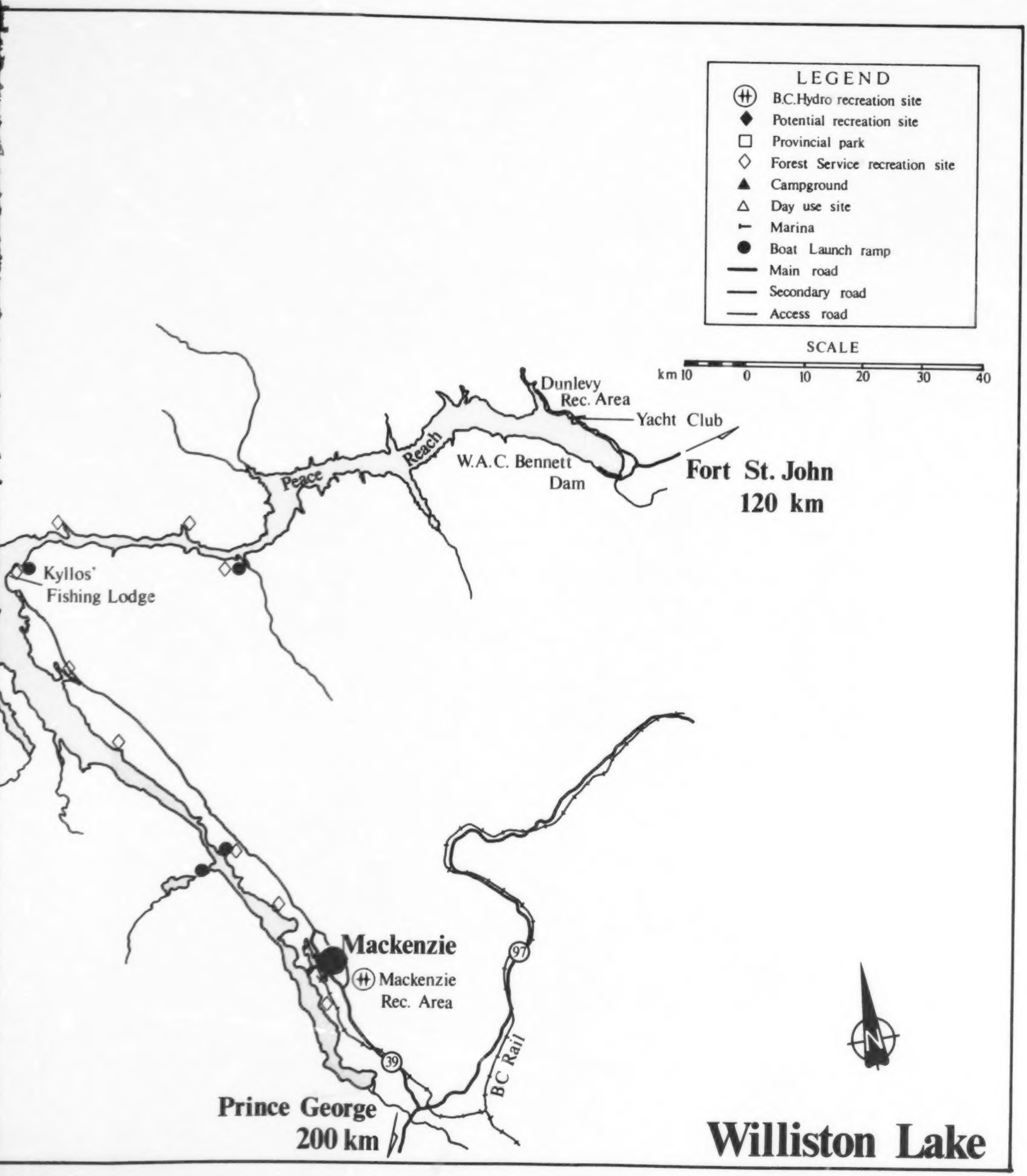
8.0 DEVELOPMENT POTENTIAL

Although the lake is scenic, there is no current potential for recreational development.

9.0 ISSUES

Recreational development of any kind would be determined by use, which is currently minimal.


Finlay Reach
Williston
Lake
Kyllos'
Fishing Loc


LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
km 10 0 10 20 30 40
Dunlevy Rec. Area
Yacht Club
Peace Reach
W.A.C. Bennett Dam
Fort St. John 120 km
Kyllos' Fishing Lodge
Mackenzie
Mackenzie Rec. Area
97
39
BC Rail
Prince George 200 km
N
Williston Lake

WILLISTON LAKE

1.0 LOCATION

Williston Lake in north-central B. C. lies in the Rocky Mountain trench for a distance of 200 km north of the District of Mackenzie and extends eastward 100 km along the Peace River through the Rocky Mountains to the W.A.C. Bennett Dam located 120 km west of Fort St. John.

Paved road access is available to Mackenzie on the Parsnip Reach and to the W.A.C. Bennett Dam on the Peace Reach. A gravel road extends north from Mackenzie to Finlay Bay along the east shore of Parsnip Reach. A gravel road near WAC Bennett Dam extends as far as Dunlevy Provincial Park.

Logging roads extend most of the way up the west side of the lake, and other areas have also been made accessible by logging. Several airstrips are located adjacent to the reservoir, some of which are for emergency use only.

2.0 LAND STATUS

Most of the land in the Williston watershed is Crown-owned. B. C. Hydro owns a parcel around the W.A.C. Bennett Dam, and some land near the dam is privately-held. The District of Mackenzie contains the only other alienated lands.

A substantial portion of the Crown Land is allotted to Timber Sale Harvesting Licences.

3.0 GENERATION FACILITIES

The W.A.C. Bennett earthfill dam is 190 m high and 2 km long. The ten generators in the Gordon M. Shrum generating station produce in excess of 2,400 MW. A 32 m reservoir drawdown is permitted in the Water Licence.

4.0 RECREATION PERSPECTIVE

Williston Lake receives a modest amount of recreational use in a variety of locations. Use is limited by a small regional population and a number of hazards on the reservoir such as high winds, large accumulations of floating debris and deadheads.

The Bennett Dam and Information Centre are major visitor attractions.

The existence of several guide outfitter territories in an area acknowledged as one of North America's best big game hunting locations suggests the possibility of further development of guiding and hunting activities.

A debris clearing program oriented toward recreational use is being conducted in co-operation with the Forest Service.

5.0 RECREATIONAL OPPORTUNITIES

Opportunities exist in many parts of the region for boating, fishing, hunting, guiding, camping, picnicking and sightseeing.

6.0 RECREATIONAL DEVELOPMENTS

B. C. Hydro's Information and Interpretative Centre at the W.A.C. Bennett Dam is the major visitor attraction at the lake. Visitor facilities also include a restaurant and picnic site.

The Dunlevy Recreation Area north of the dam, operated by B. C. Parks, provides a boat launch and minimal camping facilities.

The Portage Mountain Yacht Club is located on the road to the Dunlevy Recreation Area.

The B. C. Hydro Williston Lake Recreation Area north of Mackenzie provides:

1 single-wide concrete boat ramp
14 vehicle parking areas
6 combination camping/picnic sites
2 pit toilets
grassed open picnic area

The Forest Service maintains several recreation sites on the east side of the Parsnip Reach, two of which provide boat ramps. There is also a Forest Service boat ramp on the west side of the Parsnip Reach. Forestry picnic sites and boat ramps are located at Nation Bay and Omineka Arm on the west side of the lake.

A private fishing camp is located on the east side of the Parsnip Reach at the junction with the Peace Reach.

7.0 USE

The number of visitors to the Hydro Information Centre at the Bennett Dam in 1987 was 14,575. The Williston Lake Recreation Area received an estimated 1,250 visitors from May to September 1987.

Overall recreation use of the lake is modest.

8.0 DEVELOPMENT POTENTIAL

Development of potential sites and facilities will depend primarily upon the requirements of the local and regional population (i.e. District of Mackenzie) and to a lesser extent upon the interests of visitors to the region.

Expansion of, and improvements to, the Williston Lake Recreation Area near Mackenzie are being considered.

The Forest Service is currently developing three recreation sites for boater day use and safety on the Peace Arm, two on the north side and one on the south. Boat ramps may be provided at these sites.

There are several Forest Service recreation reserves on the Finlay Reach but none is developed.

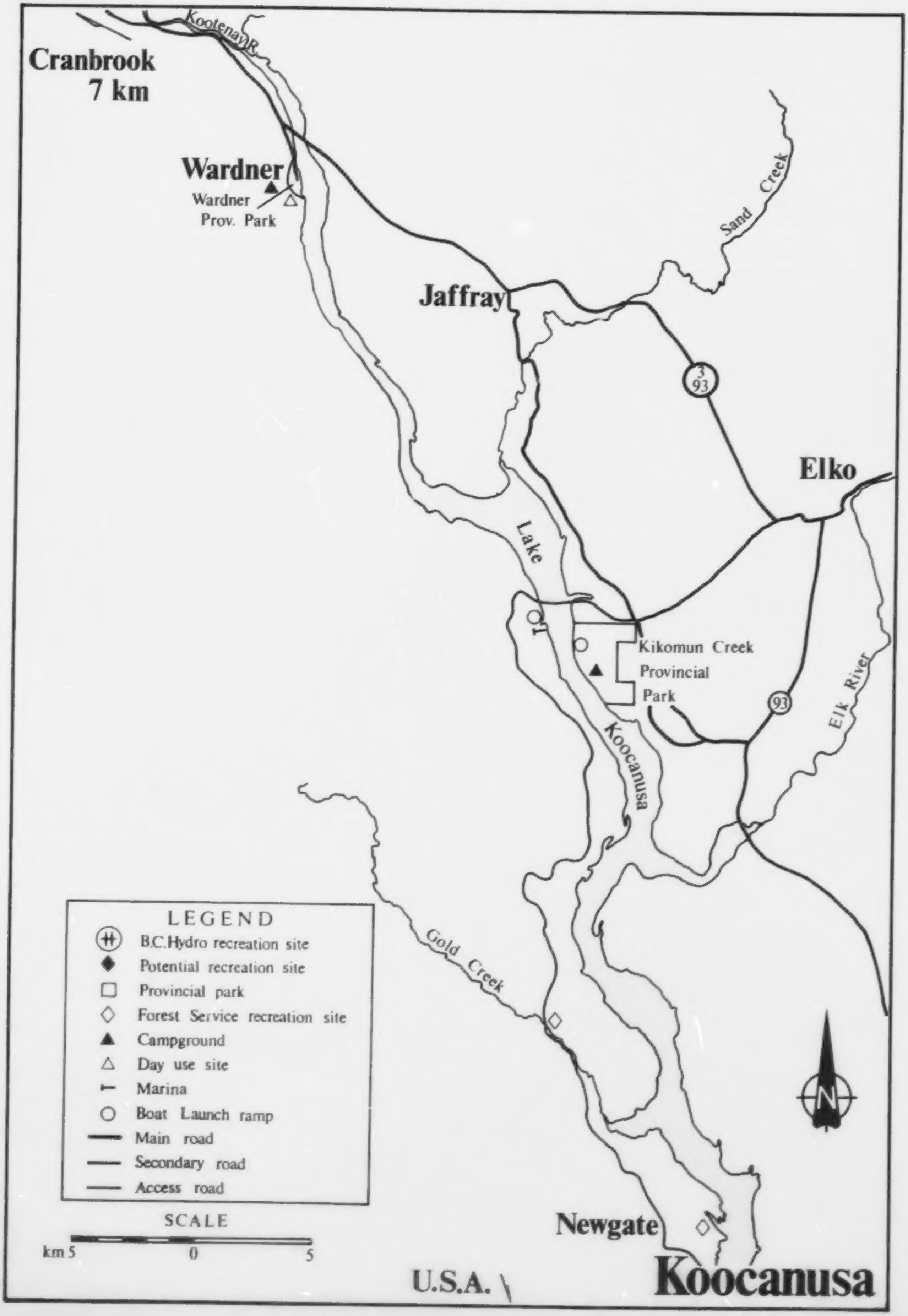
The increasing popularity among Europeans and the Japanese for wilderness guiding and hunting experiences suggests development potential for these activities.

9.0 ISSUES

Any enhancement of boating activity must take into consideration the hazards of wind and debris on the reservoir. Development of the area's guiding and hunting potential will depend upon the involvement of the private sector.

There is considered to be a general lack of boating facilities on the reservoir. Some existing boat ramps are in poor condition.

The Dunlevy Recreation Area is considered to have limited recreational value.


Kootenay R.
Cranbrook
7 km
Wardner
Wardner
Prov. Park
Sand Creek
Jaffray
3
93
Elko
Lake
Kikomun Creek
Provincial
Park
93
Elk River
Koocanusa
Gold Creek
LEGEND
B.C.Hydro recreation site
Potential recreation site
Provincial park
Forest Service recreation site
Campground
Day use site
Marina
Boat Launch ramp
Main road
Secondary road
Access road
SCALE
km 5
0
5
N
Newgate
U.S.A.
Koocanusa

LAKE KOOCANUSA

1.0 LOCATION

Lake Koocanusa is located in the Rocky Mountain trench in the east Kootenay region of British Columbia. The reservoir runs along a north-south transect commencing at the Canada-U.S. border extending to near the Bull River about 42 miles north of the border and 30 km east of Cranbrook. Access to the reservoir is provided by both paved and gravel roads.

2.0 LAND STATUS

B. C. Hydro was not involved in property acquisition for the Koocanusa reservoir. Lands were acquired by the Ministry of Highways in right of the province. A variety of private tenures such as forms, ranches, a commercial campground crown lease, provincial parks, and provincial forests surround much of the reservoir.

3.0 GENERATION FACILITIES

Lake Koocanusa is formed by the Libby Dam, a Columbia River Treaty facility, on the Kootenay River, located 17 miles upstream of Libby Montana. Lake Koocanusa is a 90-mile long reservoir formed by the dam. The Libby dam was designed and constructed by the U.S. Corps of Engineers of which the upper 42 miles is in Canada. It is 3,055 feet long at the crest with a height above the stream bed of 370 feet. Spillway capacity is 154,000 cfs at full pool. The generating station is capable of 8 generating units having a capacity of 105,000 kW each.

Under the Columbia Treaty, signed in 1961 and ratified in 1964, Canada has borne the cost of clearing and operating the upper 42 mile stretch of Lake Koocanusa. The U.S. Forest Service has jurisdiction on the U.S. portion of Lake Koocanusa and operates a number of public recreation sites and facilities.

4.0 RECREATION PERSPECTIVE

The Canadian portion of Lake Koocanusa receives high levels of ad-hoc recreation use. The excellent Kookanee sport fishery attracts fisherman who camp at any accessible location on the reservoir. The reservoir reaches its peak elevation in early summer. The southern portion of the lake experiences the greatest amount of unregulated use because it fills earliest providing the first seasonal access to the fishery.

Access to the reservoir is readily achievable by either paved roads from the east or gravel forest access roads along the south west shore.

5.0 RECREATIONAL OPPORTUNITIES

Lake Koocanusa provides opportunities for fishing, boating, camping, picnicing and nature study.

6.0 RECREATIONAL DEVELOPMENTS

A provincial park is located at Wardner at the north west edge of the lake and at Kikomun Creek about 15 miles downstream on the east shore. A commercial campground and boat launch ramp is located on crown land on the west shore opporite the Kilomun Creek Provincial Park. A park reserve at Newgate, on the west shore at the southern end of the lake is presently receiving some facilities in a joint project by Parks Branch and B. C. Hydro. Forest Service campsites are located along Gold Creek and Plumbbob Creek to the west of the reservoir.

7.0 USE

Seasonal use of the Kikomun Provindial Parks campsite facilities has reached saturation point in recent years. Use of the Wardner Park appears to be minimal, perhaps due to low water levels in recent years, and the interest in the south portion of the lake due to the excellent fishing opportunities in that area. Existing facilities are clearly insufficient for existing summer use levels.

8.0 DEVELOPMENT POTENTIAL

The existing park reserve at Newgate can be developed to meet some of the demand for campsites in that area of the reservoir. Long term improvements will require provision of a full size campground, a boat launch ramp which can accommodate the 21.5 metre drawdown, and a variety of traffic control measures to reduce the present impact on the fragile soils caused by ad hoc vehicle traffic.

Demand exists for other sites along the lake which also have development potential.

9.0 ISSUES

Filling of the reservoir may be delayed dependent on snowpack of other climatic variances. Late filling creates heavy public demand for recreation opportunities at the southern portion of the reservoir. This delayed filling also leaves boat launch ramps unuseable at the mid-reservoir area.

The high levels of public use creates problems for residents at Newgate due to the unregulated use experienced in that area. The Newgate residents are called upon to respond to emergencies or provide assistance to people stuck in the sand along the reservoir.

Low water levels in the spring require that cattle fences be maintained out into the reservoir area. These are potentially hazardous to boaters later in the year when the reservoir is flooded.

The high levels of ad hoc camping use has raised serious concern about available safe, clean water and sanitation facilities.